RESOURCE FACTORS HANDBOOK

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PREFACE

This edition of the TRADOC Resource Factors Handbook contains updated resource estimating factors expressed in FY 01 dollars. The handbook also contains selected realignment and personnel cost factors in FY 01 dollars, as well as inflation indices for selected years .

The handbook is divided into two sections. Section I contains the resource estimating relationships: (1) OMA cost estimating relationships (CER) and (2) manpower estimating relationships (MER). Section II addresses permanent change of station and civilian/military pay and benefit factors. The development and use of the resource factors are discussed in each section. It is imperative that you read the narrative prior to using the factors to understand their limitations and to apply them appropriately. Each section contains computation examples to assist you in correctly applying the factors.

Questions, comments, and recommendations for the handbook are encouraged. We call your attention to Appendix C, "Analysis Support", which lists various types of cost analyses for which you can obtain assistance and the points of contact to call . If you have a model or project which is of interest to the cost analysis community, please let us know so we can include it in our next update.

INTRODUCTION

1. **PURPOSE:**

Army managers must be able to relate various Operation and Maintenance, Army (OMA) functions to common measures of workload to document need. Documented resource to workload relationships can then be used as management tools in deciding the most productive application of scarce resources to conduct the mission. This handbook contains cost and manpower factors which allow Army managers and others to make quick resource estimates at program element and activity level based on projected changes in workload.

2. **SCOPE:**

a. The TRADOC Resource Factors Handbook (RFH) is divided into two sections. Section I contains OMA cost estimating relationships (CER) and manpower estimating relationships (MER). Section II provides general cost factors useful for planning, realignment, and reorganization studies.

b. ***Section I***. The CER equations in this section address the following: Recruit Training (BCT), General Skill Training (ATC and School), Combined Recruit and Skill Training (OSUT), Officer Candidate School (OCS), Professional Military Education, Undergraduate Pilot Training, Other Flight Training, General Intelligence Skill Training, Reception Battalions, and Base Operations. The MER equations address the same accounts with the exception of BCT and OSUT, whose manpower are predicted by structure models and MS^3 instructor standards.

c. ***Section II.*** These cost factors address military and civilian benefits, permanent change of station (PCS) costs, pay tables, and TRADOC installation and activity average salaries. Section II is a stand-alone set of information. All supporting methodologies, definitions, and data sources are cited with each cost factor.

SECTION I

1. **DEFINITIONS:**

a. ***Fixed Resources*** - Resources (manpower and dollars) which are not responsive to changes in the workload. Sometimes referred to as static costs.

b. ***Variable Resources*** - Those resources that relate directly to workload and change as the workload level changes.

c. ***Variable Resource Factor*** - A factor which, when multiplied by the relevant workload, determines the variable resources.

d. ***Coefficient of Determination (r^2)*** - A statistical measure which expresses the percentage of change (variation) in the total dollars that is driven by the workload in the equation. A value of 1.00 indicates that all the changes are driven by the load; a value of 0 shows that none of the resource change can be explained (or is driven) by the load. The Flying Hour CER are modeled by regression; therefore, the r^2 only applies to these equations. The higher the r^2 value, the closer the actual data points used to develop these CER approximate a straight line.

e. ***Student Load*** - An annualized figure computed by multiplying input by course length and dividing by 50. Also referred to as average daily student load. Variants of student load found in this handbook are “financed load” which takes into account historic attrition rates, and “structure load” which augments course length for administrative purposes. NOTE: The workload for BASOPS CER and MER is population supported taken from the Army Stationing and

Installation Plan (ASIP); however, the ASIP student loads are replaced with actual loads for the CER and financed loads for MER.

2. **PROCEDURE:**

a. With the exception of Graduate and Undergraduate Pilot Training, CER were developed using double exponential smoothing applied to an eleven year (FY90 through FY00) data base. Separate equations were developed for personnel and nonpersonnel costs. To assure valid and timely relationships, adjustments were made to current year data to acknowledge recent, non-recurring experience. Potential non-recurring adjustments were submitted to the appropriate program directors for verification before being purged from the current year data base. The use of a smoothing technique weighted in favor of the most recent experience assures a prediction more in line with current Army and TRADOC resourcing policies. The technique smooths based on both historical values and the general trend of the data by applying an exponentially declining set of weights to the back years, hence the name double exponential smoothing. In addition, a tracking model evaluates the forecasts for nonrandom error (bias) to ensure the final forecast conforms to an acceptable level of reliability with 95% confidence. All of the published CER meet this standard.

b. The MER methodology on the other hand approximates the cost per output approach. This technique entails dividing total allocations by total load to yield a unit ratio of allocation to load.

c. The composition of the CER and MER continue to change in response to accounting changes and other management intiatives. A summary of the approach used in this edition of the handbook follows:

(1) Except for pilot training CER, which address total student load/input and total dollars, CER dependent variable (Y) addresses only the direct dollars (to include civilian pay), and only U.S. students are included in the student load count. NOTE: Separate civilian pay and nonpay CER are published in Appendix A of this handbook.

(2) Resources for NCOA, DSS, and school troops are included in the school CER and MER where applicable.

(3) BASOPS CER and MER are developed at the total level with no separate equations for real property maintenance (RPM) and BASOPS minus. Total direct supported population is used as the independent variable instead of military man-years supported.

(4) BASOPS CER and MER contain resources for family programs. (Family Centers and Child Development) and Tactical Equipment Maintenance in addition to the traditional BASOPS minus and RPM accounts.

(5) Mobile Subscriber Equipment (MSE) is not included in Signal School; Defense Acquisition University (DAU) is not included in Army Logistics Management College equations; no separate equation for Cryptologic/Sigint training; Unmanned Aerial Vehicle (UAV) was backed out of the Intelligence School CER.

d. Both the CER and MER are expressed as linear equations of the form $Y = a + bx$, where a = fixed amount, b = variable resource factor, and x = workload.

3. **USES:**

a. CER are generally used to compute marginal adjustments to the recurring funding level resulting from changes in the workload. This is accomplished by applying the workload delta to the variable portion of the CER equation. The dollars obtained can then be broken between personnel and non-personnel by applying the personnel and nonpersonnel

equations published in Appendix A. Additionally, the civilian pay portion can be converted to number of civilians by dividing by the appropriate civilian salary contained in this handbook.

b. CER and MER equations can be used from a zero base to compare with estimates developed via the traditional budget method. When using the CER and MER from a zero base approach, all new and old missions, one time costs, new programs and projects not covered by the equations must be added or subtracted from the results of the CER or MER.

c. Because of the long lead times required in the manpower requisition, recruiting, and reduction in force (RIF) processes, MER are primarily used in programming documents and "what if?" exercises.

d. Use of these factors should assist in an equitable distribution of funds and manpower to program elements within TRADOC based on projected workloads.

4. **EXAMPLE:**

a. The following example shows how the CER and MER can and should be used to assess the resource impact of a change in student load. Using Fort Eustis, the example shows the dollar and manpower impact of a 100 increase in student load at the Transportation School.

b. The first step is to apply the Fort Eustis CER to determine the mission O&M impact. The Transportation School CER is:

$$Y = \$4,407,009 + \$7,459X$$

Multiplying the variable factor of $7,459 by the workload change (X) of 100 yields the adjustment required to the recurring mission obligations:

$$\$7,459 * 100 = \$745,900$$

c. Because the CER O&M dollars include civilian pay, apply the personnel CER variable factor (Appendix **A**) to obtain the mission civilian pay impact.

$$\$3,892 * 100 = \$389,200$$

Divide this figure by the Transportation School average civilian salary found after Section II of this handbook to obtain the equivalent number of direct funded civilians. NOTE: Civilians paid on a reimbursable basis are not included in the CER.

$$\$389,200 / \$50,205 = 8 \text{ civilians}$$

Thus, a student load increase of 100 will result in an estimated mission increase of 8 civilians and $356,700 ($745,900 - $389,200) in mission non-personnel costs at the Transportation School.

d. Next, determine the impact on the number of military assigned to the Transportation School by applying the workload change to the Transportation School MER variable factor. The MER is:

$$Y = 184 + .227 X$$

Again, multiplying the variable factor by the proposed workload change yields the change in the number of mission support military (rounded to nearest whole) resulting from the change in workload.

$$.227 * 100 = 23 \text{ military}$$

This figure can be categorized by officer, warrant officer and enlisted by applying the percentage breakout figures included with the MER equation. This yields the following breakout:

Off	23 * .132 =	3
WO	23 * .032 =	1
Enl	23 * .835 =	19
Total		23

e. A change in student load will also have an impact on BASOPS resources since students are included in the population figure used to develop the BASOPS CER and MER. First compute the total change in the population supported by BASOPS by adding the changes in the mission civilian and military populations (i.e., 8 + 23), obtained in section c and d, to the student load change of 100.

$X = 100 + 8 + 23 = 131$

Then use the following relationship to determine the adjusted change in workload which will be used to determine total BASOPS impact.

$X / [1 - b_m - (b_c / S)]$, where: b_m is the Fort Eustis BASOPS MER variable factor (.015)
b_c is the Fort Eustis BASOPS personnel CER variable factor ($1,280)
S is the Fort Eustis average BASOPS civilian salary ($54,862)

Substituting values for the variables yields:

$131 / [1 - .015 - (1,280 / 54,862)] = 131 / .962 = 136$

The difference between the 131 and the 136 (i.e., **5**) represents the required change in the BASOPS work force (military and civilian).

Multiplying the adjusted workload figure obtained above by .015 yields the estimated increase in the BASOPS military work force required by the change in supported population.

136 * .015 = 2 military

Using the military percentages for Fort Eustis BASOPS MER categorize this figure as officer, warrant officer and enlisted as follows:

Off	2 * .137 =	0
WO	2 * .021 =	0
Enl	2 * .842 =	2
Total		2

f. Next, determine the civilian BASOPS impact by subtracting the military computed above from the total BASOPS work force change:

5 - 2 = 3 civilians

Then, multiplying this number by the Fort Eustis average BASOPS civilian salary yields the change in BASOPS civilian pay:

3 * $54,862 = $164,586 in civilian pay

g. Finally, assess the impact on the BASOPS non-personnel dollars by applying the non-personnel BASOPS CER variable factor (Appendix A) to the total change in supported population, i.e., 136.

$1,022 * 136 = $138,992 in non-personnel dollars

h. Recapping, the estimated total dollar and manpower impact of a 100 student load increase at the Fort Eustis Transportation School would be:

Mission - A $745,900increase in mission dollars of which $389,200 is civilian pay. The civilian pay figure equates to 8 civilians. The school would also gain 23 military personnel.

BASOPS - A $303,578 increase in BASOPS dollars of which $164,568 is civilian pay (equates to 3 civilians) and $138,992 is non-personnel. This change would also result in an increase in the BASOPS work force of 2 military.

i. The above manpower figures represent authorizations. Manpower requirements can be computed by dividing these figures by the appropriate authorizations to requirements ratio published with the MER equations. The computation is:

	MISSION		BASOPS	
Civilians	[Auth] 8 / .63 = 13	[Rqmts]	[Auth] 3 / .40 = 8	[Rqmts]
Military	[Auth] 23 / .80 = 29	[Rqmts]	[Auth] 2 / .76 = 3	[Rqmts]

5. **TRADOC COMPOSITE CER and MER:**

a. TRADOC composite CER and MER have been developed for each Program Element (PE) that includes more than one installation or activity.

b. The composite factors were developed as follows:

(1) The combined fixed or "a" value (static cost) is the sum of the personnel and non-personnel "a" values.

(2) The variable or "b" value (variable cost per workload unit) is the result of dividing the sum of the individual variable cost values (ΣbX) by the sum of the individual workload values (ΣX), using the FY 96 workload units as X in each CER and MER ($\Sigma bX / \Sigma X$). This results in a weighted average variable cost factor.

c. If the total workload is applied against the composite equation, total TRADOC recurring resources are estimated.

SECTION I

OMA COST ESTIMATING RELATIONSHIPS

MILITARY MANPOWER ESTIMATING RELATIONSHIPS

PROGRAM 3 - TRAINING

Function	***Workload Units[1]***
Officer Candidate School	Average Daily Student Load
Recruit Training	Average BCT Load
Combined Recruit and Skill Training (OSUT)	Average OSUT Load
General Skill Training (ATC)	Average AIT Load
General Skill Training (Schools)	Average Daily Student Load
General Intelligence Skill Training	Average Daily Student Load
Undergraduate Pilot Training Flight Student Flying Hours	Average Daily Load and
Graduate Pilot Training Input/Load and Flying	Annual Student Hours
Professional Military Education	Average Daily Student Load

COST ESTIMATING RELATIONSHIPS (CER)
FIXED and VARIABLE COST FACTORS
OMA RECURRING COSTS: FY 01 DOLLARS

CER: $Y = a + bX$

Where: **Y** = *OMA recurring costs*

a = *Estimated fixed cost*

b = *Estimated cost per workload unit (Variable Cost Factor)*

X = *Number of workload units*

[1] Workload units are U.S. students only except for Undergraduate and Graduate Pilot training which use total load (i.e., U.S. and foreign).

OFFICER CANDIDATE SCHOOL (OCS) BRANCH IMMATERIAL (PE 311722)

Workload Factor: Average Resident U.S. Student Load

PE 311722	OCS		*OMA CER FY 01 Dollars* Y =	a	+	b	X	FY 00 Workload
	Benning		Y =	$158,789	+	$457	X	206

RECRUIT TRAINING (PE 312711)

Workload Factor: Average U.S. BCT Load

PE 312711	ATC		*OMA CER FY 01 Dollars* Y =	a	+	b	X	FY 00 Workload
	Jackson		Y =	$401,057	+	$353	X	6,015
	Knox		Y =	$497,013	+	$319	X	1,558
	Sill		Y =	$376,752	+	$214	X	2,037
	Leonard Wood		Y =	$540,082	+	$228	X	1,973
	TRADOC Composite		Y =	$1,814,904	+	$302	X	

NOTES: Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER, see Appendix A.

COMBINED RECRUIT AND SKILL TRAINING (OSUT) (PE 313761)
Workload Factor: Average U.S. OSUT Load

PE 313761	ATC		*OMA CER FY 01 Dollars* Y =	a	+	b	X	FY 00 Workload
	Benning		Y =	$1,185,521	+	$324	X	3,563
	Knox		Y =	$1,169,389	+	$4,704	X	1,331
	Sill		Y =	$989,729	+	$1,047	X	661
	Leonard Wood		Y =	$205,964	+	$1,679	X	1,142
	Leonard Wood Chem.		Y =	$170,518	+	$718	X	602
	Leonard Wood MP		Y =	$221,795	+	$493	X	1,533
	TRADOC Composite		Y =	$3,942,916	+	$1,270	X	

NOTES: Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER, see Appendix A.

GENERAL SKILL TRAINING (ATC) (PE 321731)
Workload Factor: Average U.S. AIT Load

PE 321731.1	ATC		*OMA CER FY 01 Dollars* Y =	a	+	b	X	FY 00 Workload
	Jackson	Y =	$566,344	+	$642	X	833
	Leonard Wood	Y =	$2,987,864	+	$1,545	X	1,496
	TRADOC Composite	Y =	$3,554,208	+	$1,222	X	

NOTES: Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER, see Appendix A.

GENERAL SKILL TRAINING (SCHOOLS + NCOA/DSS) (PE 321731)
Workload Factor: Average Resident U.S. Student Load

PE 321731.2/.4	SCHOOL	Y =	*OMA CER FY 01 Dollars* a	+	b	X	FY 00 Workload
0.2	Air Defense	Y =	$5,386,867	+	$3,497	X	885
0.2	ALMC	Y =	$7,373,753	+	$4,025	X	458
0.2	Armor	Y =	$5,893,843	+	$7,337	X	944
0.2	Avn Logistics School	Y =	$2,466,344	+	$5,688	X	1,415
0.2	Aviation (Nonflt)	Y =	$2,829,899	+	$3,076	X	542
0.2	CAS3	Y =	$32,456	+	$354	X	475
0.2	Chaplain	Y =	$1,147,149	+	$2,395	X	101
0.2	Chemical	Y =	$1,717,255	+	$2,659	X	314
0.2	Engineer	Y =	$1,644,142	+	$1,712	X	632
0.2	Field Artillery	Y =	$3,682,888	+	$2,289	X	1,445
0.2	Infantry	Y =	$5,390,172	+	$1,930	X	2,417
0.2	Missile & Munitions	Y =	$3,936,326	+	$8,095	X	558
0.2	Military Police	Y =	$1,372,664	+	$1,608	X	456
0.2	Ordnance	Y =	$4,464,982	+	$3,421	X	2,022
0.2	Quartermaster	Y =	$1,909,914	+	$1,824	X	3,204
0.2	Signal	Y =	$4,535,831	+	$3,343	X	3,206
0.2	SMPT	Y =	$590,248	+	$7,322	X	112
0.2	Transportation	Y =	$4,407,009	+	$7,459	X	580
0.2	U.S. Army SSI	Y =	$2,511,633	+	$817	X	2,020
0.2	Warrant Officer Career Ctr	Y =	$545,207	+	$1,659	X	188
0.4	DLI	Y =	$18,291,893	+	$10,543	X	2,928
	TRADOC Composite	Y =	$80,130,475	+	$3,959	X	

NOTES: Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER, see Appendix A.

GENERAL INTELLIGENCE SKILL TRAINING (PE 321733/34)

Workload Factor: Average Resident U.S. Student Load

			OMA CER FY 01 Dollars				
PE 321733/34	SCHOOL	Y =	a	+	b	X	FY 00 Workload
	Intelligence	Y =	$7,483,697	+	$2,112	X	1,897

NOTES:

1. Since the move of CRYPTO/SIGINT training to Ft. Huachuca, we no longer develop a separate CER for PE 321734.
2. The above CER does not include the Unmanned Aerial Vehicle (UAV) program.

UNDERGRADUATE PILOT TRAINING (UPT) (PE 322741)
Workload Factors: Average Resident Flight Student Load and Flying Hours

			OMA CER FY 01 Dollars				
PE 322741	UPT Fort Rucker	Y =	a	+	b	X	FY 00 Workload
			FY 99 Flight Training Program				
	Academic CER Workload: Average Res. Flt. Student Load	Y =	$19,044,531	+	$25,704	X	604
PLUS							
	Flying Hour CER Workload: Flying Hours	Y =	$7,077,966	+	$368	X	159,824
	TRADOC Composite Workload: Average Res. Flt. Student Load	Y =	$26,122,497	+	$113,280	X	

NOTES:

1. Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER see Appendix A.
2. The Flying Hour CER are based on the projected FY 99 flying hour pattern as of April, 1999.
3. Composite CER accounts for costs of POL, repair parts, contract maintenance, DLRS, contract refueling, academics and personnel.
4. Aircraft CER: OH-58C (r2=.94); UH-1 (r2=NA); TH-67 (r2=NA).

ADVANCED/GRADUATE FLIGHT TRAINING (GPT) (PE 322743)
Workload Factor: Annual Student Load

			OMA CER FY 01 Dollars			
PE 322743	**Aviation**	**Y =**	**a**	**+**	**b**	**X**
	Fort Rucker	**CER listed by Course**				
			FY 99 Flight Training Program			
Fixed Wing						
U-21 FWME Instr. Pilot Crs.	2B-SIG2/2B-SQIC(U-21)	Y =	$214,662	+	$93,290	X
Rotary Wing*						
AH-64 Aviator Qualification Course	2C-SID5/152F	Y =	$2,067,079	+	$627,415	X
AH-64 Instructor Pilot Course	2C-SIG2/2C-SQIC(AH-64)	Y =	$270,536	+	$1,142,931	X
AH-64 Instructor Pilot MOI	2C-SIG2/SQIC (AH-64)	Y =	$147,501	+	$497,445	X
AH-64 MM/Maintenance Test Pilot	4D-SIG6/SQIG(AH-64)	Y =	$196,170	+	$340,727	X
CH-47D Aviator Qualification Course	2C-SIC2/2C-154C	Y =	$4,493,610	+	$315,030	X
CH-47D Instructor Pilot Course	2C-SIG2/2C-SQIC(CH-47D)	Y =	$982,106	+	$392,890	X
CH-47D Instructor Pilot MOI	2C-SIG2/SQIC(CH-47D)	Y =	$574,018	+	$561,188	X
CH-47D MM/Maintenance Test Pilot	4D-SIG6/SQIG(CH-47D)	Y =	$397,981	+	$370,983	X
OH-58 Instructor Pilot Course	2C-SIG2/2C SQIC (OH-58)	Y =	$20,205	+	$143,246	X
OH-58C Aero Instr Pilot MOI	2C-SIG2/SQIC (OH-58A/C)	Y =	$2,518	+	$129,028	X
OH-58C MM/Maintenance Test Pilot	4D-SIG6/SQIG (OH-58C)	Y =	$10,304	+	$67,433	X

NOTES:

1. Workload for these equations is student load . Student input variables are contained in Appendix A.
2. Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER see Appendix A.

*CER continued on the next page

ADVANCED/GRADUATE FLIGHT TRAINING (GPT) (PE 322743)
Workload Factor: Annual Student Load

			OMA CER FY 01 Dollars			
PE 322743	**Aviation**	**Y =**	**a**	**+**	**b**	**X**
	Fort Rucker	**CER listed by Course**				
			FY 00 Flight Training Program			
Rotary Wing (cont'd)						
OH-58D Warrior Instructor Pilot MOI	2C-SIG2/SQIC (OH-58D)	Y =	$188,845	+	$299,409	X
OH-58D Instructor Pilot Course	2C-SIG2/2C-SQIC (OH-58D)	Y =	$710,593	+	$303,145	X
OH-58D W. Aviator Qualification Course	2C-SIA3/152D	Y =	$4,436,829	+	$378,291	X
OH-58D MM/Maintenance Test Pilot	4D-SIG6/SQIG(OH-58D)	Y =	$323,156	+	$170,354	X
UH-1 Instructor Pilot MOI	2C-SIG2/SQIC(UH-1)	Y =	$81,428	+	$125,786	X
UH-1 Instructor Pilot Course	2C-SIG2/2C-SQIC (UH-1)	Y =	$702,028	+	$89,174	X
UH-1 Maint Test Pilot	4D-SIG6/SQIG(UH-1)	Y =	$181,661	+	$62,371	X
UH-60 Aviator QualificationCrs.	2C-SIB2/2C-153D	Y =	$4,539,418	+	$270,456	X
UH-60 Instructor Pilot Course	2C-SIG2/2C-SQIC(UH-60)	Y =	$436,955	+	$271,444	X
UH-60 Instructor Pilot MOI	2C-SIG2/SQIC(UH-60)	Y =	$492,057	+	$317,907	X
UH-60 MM/Maintenance Test Pilot	4D-SIG6/SQIG(UH-60)	Y =	$373,022	+	$206,885	X

NOTES:

1. Workload for these equations is student load . Student input variables are contained in Appendix A.
2. Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER see Appendix A.
3. Each course CER represents a composite of academic costs, flying hour (FH) costs, and personnel costs.
4. Fixed wing CER are derived from academic CER and flying hour CER. Aircraft: U-21 (r2=.92).
5. The remaining courses are derived from academic CER and flying hour CER for applicable aircraft. Aircraft: AH-1 (r2=.99); AH-64 (r2=.95); CH-47D (r2=.89); OH-58C (r2=.94); OH-58D (r2=.98); UH-60 (r2=.91).
6. The contract costs for the FWMEQC and C-12 are not included in the CER.

PROFESSIONAL MILITARY EDUCATION (PE 323751)
Workload Factor: Average Resident U.S. Student Load

PE 323751	SCHOOL	Y =	OMA CER FY 01 Dollars a	+	b	X	FY 00 Workload
	C & GSC (Leavenworth)	Y =	$4,468,812	+	$4,729	X	833
	SMA (Bliss)	Y =	$819,462	+	$1,086	X	609
	TRADOC Composite	Y =	$5,288,274	+	$3,190	X	

NOTES: Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER, see Appendix A.

PERSONNEL PROCESSING ACTIVITIES
(RECEPTION BATTALIONS)

COST ESTIMATING RELATIONSHIPS (CER)

FIXED and VARIABLE COSTS: FY 01 DOLLARS

CER: $Y = a + b_1X_1 + b_2X_2$

Where: Y = *OMA direct recurring costs*

a = *Estimated fixed cost*

b_1 = *Estimated variable cost (Reception Battalion operations) per workload unit*

X_1 = *Number of workload units*[1]

b_2 = *Estimated variable cost (organizational clothing bag issue*[2] *) per workload unit*

X_2 = *Number of workload units*[3]

[1] Total number of receptees handled.

[2] OMA FY01 winter clothing bag contents are: 2 brown CW drawers, 2 brown CW shirts, 1 CW cap, 1 barracks bag, 1 pair of ear plugs and case, 6 nametapes, 6 U.S. Army tapes, 1 necklace, 2 ID tags, 2 cover tags. The summer clothing bag issue does not include the CW drawers and CW shirts. The cost for the winter issue is $58.10; for the summer issue, $22.90. The weighted average is applicable to both prior service and Active Army receptees.

[3] Total number of Active Army and prior receptees.

RECEPTION BATTALION (PE 312714)

Workload Factors: X1=Total Receptees X2= Active Army

OMA CER
FY 01 Dollars

PE 312714	INSTALLATION	Y =	a	+	b1	X1	+	b2	X2	FY 00 X1 Workload
	Benning	Y =	$477,078	+	$37	X1	+	$41	X2	27,047
	Jackson	Y =	$178,979	+	$30	X1	+	$41	X2	35,711
	Knox	Y =	$200,810	+	$37	X1	+	$41	X2	13,505
	Sill	Y =	$259,606	+	$39	X1	+	$40	X2	15,568
	Leonard Wood	Y =	$253,534	+	$32	X1	+	$44	X2	22,370
	TRADOC Composite	Y =	$1,370,007	+	$34	X1	+	$41	X2	

NOTES:

1. The b2 is the weighted average of issue to FY 00 Active Army and prior service summer and winter receptees, where winter costs are computed for October through April, and summer costs are computed for May through September.
2. Workload units for X1 are the total number of receptees handled, i.e., Active Army, Army Reserves & National Guard.
3. Workload units for X2 are the number of Active Army and prior service personnel handled.
4. Civilian pay is contained only in the a + b1X1 portion of the equation.
5. Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER, see Appendix A.

BASE OPERATIONS

COST ESTIMATING RELATIONSHIPS (CER)

FIXED and VARIABLE COSTS: FY 01 DOLLARS

CER: $Y = a + bX$

Where: Y = *OMA direct recurring costs*

a = *Estimated fixed cost*

b = *Estimated cost per workload unit (Variable Cost Factor)*

X = *Number of direct workload units*[1]

[1] Population supported is used as the workload unit for the base operations .Z account level. The population supported figure includes both military and civilians. The source for this data, excluding student load, is the Army Stationing and Installation Plan (ASIP) used in building the FY00 TRADOC Budget Guidance (TBG). Population supported includes garrison, tenants, and actual student load. (**NOTE: Receptees are not included in the population supported figure**). DBOF (e.g., DFAS, DECA, MEDDAC), Satellite and non-DOD personnel are excluded from the population supported figures; however, in those cases where dollars are incurred by the host to support satellites, man-years and work force are also included in the resource estimating relationships.

BASE OPERATIONS - TRADOC (PE 325796.Z)*
Workload Factor: Population Supported

PE 325796.Z*	INSTALLATION		*OMA CER FY 01 Dollars* a		b		FY 00 Workload
	Benning	Y =	$52,232,551	+	$1,972	X	20,752
	Bliss	Y =	$40,771,358	+	$2,099	X	11,392
	Carlisle Barracks	Y =	$8,359,485	+	$1,795	X	1,080
	Eustis	Y =	$24,293,308	+	$2,176	X	10,775
	Gordon	Y =	$32,366,644	+	$2,492	X	9,604
	Huachuca	Y =	$26,161,432	+	$2,164	X	7,445
	Jackson	Y =	$39,264,553	+	$1,564	X	12,892
	Knox	Y =	$56,167,911	+	$2,210	X	13,210
	Leavenworth	Y =	$19,692,350	+	$2,060	X	4,447
	Lee	Y =	$31,203,931	+	$1,666	X	8,123
	Monroe	Y =	$17,929,854	+	$1,655	X	2,223
	Presidio of Monterey	Y =	$22,787,799	+	$3,123	X	4,347
	Rucker	Y =	$39,021,454	+	$3,461	X	6,029
	Sill	Y =	$35,330,287	+	$1,872	X	16,044
	Leonard Wood	Y =	$46,057,168	+	$2,190	X	14,423
	TRADOC Composite	Y =	$491,640,085	+	$2,115	X	

NOTES:
1. Above CER contain civilian pay as well as nonpay dollars. For separate personnel and nonpersonnel CER, see Appendix A.
2. BMAR is not included in the CER.
3. The definition of population supported is found on the previous page.
4. *Also contains PEs 326776, 326778, 326793, 325779, 325719, 325720 and 324020.

MANPOWER ESTIMATING RELATIONSHIPS (MER)

1. INTRODUCTION: The manpower estimating relationships (MER) are developed based on the military authorized (allocated) work force, and are used primarily for planning and programming exercises. Other Service, National Guard and Reserve personnel are not included in the MER equation. MER authorizations can be converted to requirements using the procedures described in para. 3. e. below. *NOTE: The civilian work force is implicitly included in the CER equation.*

2. PROCEDURE:

a. Service Schools, Advanced Individual Training, Reception Battalion, and Base Operations. The MER for these functions were developed using a unit cost approach. The 0202 TDA, documented in the May 2001 Command Plan, was used as the source for the military authorizations. The structure load used to build the 0202 TDA (as documented in ATRRS in Feb 00) was used as the workload for the mission MER. Population supported figures from the FY02 TRADOC Budget Guidance (TBG) augmented with FY02 financed loads served as the BASOPS workload.

b. Recruit training (BCT) and Combined Recruit and Skill Training (OSUT). MER for BCT and OSUT have not been included in this handbook as estimates can be developed using a structure analysis; e.g., the number of companies required to train a given input. The model features training organization building blocks which allow flexibility in the placement of training companies at training centers for maximum utilization of facilities. The model applications are described in more detail later in this section.

3. USES:

a. The MER equations can be used as an independent validation for a military manpower program determined in another manner, or the variable portion of the equation can be used to assess changes in military associated with changes in the workload.

b. BASOPS MER Applications. When using the MER to estimate changes due to workload fluctuations, the workload can be initially modified as follows to include the number of additional staff required to support the change in the work force required to handle the change in the workload. Another way of saying this is that the BASOPS support personnel will themselves require BASOPS support. The computation to determine the additional BASOPS support personnel has been complicated by the inclusion of civilian pay in the CER. The following adjustment must be made to reflect the total BASOPS work force impact (civilian as well as military):

$$\mathbf{X / [1 - b_m - (b_c / S)]}$$

Where **X** = initial change in population supported, and
$\mathbf{b_m}$ = BASOPS MER variable coefficient
$\mathbf{b_c}$ = BASOPS personnel CER variable coefficient
S = average civilian BASOPS salary

Example: The MER representing Fort Eustis BASOPS military work force is:

$$Y = 133 + .015\ X$$

The Fort Eustis BASOPS personnel CER (Appendix **A**) is:

$$Y = \$11{,}588{,}607 + \$1{,}280\ X$$

The average BASOPS civilian salary at Fort Eustis is $54,862.

The desired increase in workload is 100:

X = 100

Substituting numbers for letters in the above formula yields:

100 / [1 - .015 - (1,280 / 54,862)]

Solving the expression:

100/.962 = 104, the total support requirement,

The difference between the original 100 and the calculated 102 (i.e., 2) is the required change in the BASOPS work force. The military portion of this number can be determined as follows:

104 * .015 = 2 which is the estimated increase in the military work force required by the desired change in supported population.

The civilian BASOPS work force change is therefore the total work force change minus the military portion:

4 - 2 = 2 civilians

c. Percentage Distribution. Since the MER address military manpower in all categories (officer, warrant officer, and enlisted), a percent spread was developed based on the 0202 TDA. If the manpower is multiplied by the applicable percent, an estimate of the number of personnel by category can be obtained (see example in paragraph 4 of Section I narrative). **NOTE**: The percent spread of the manpower may change proportions when going from an allocation to a requirements equation. The illustrated distributions are for estimating purposes only.

d. Average Salaries. Section II of this handbook contains the military and civilian average salaries by account and installation for TRADOC. Military pay costs can be computed using the standard composite pay rates or the average military salaries times the military manpower figures obtained using the method in the previous paragraph.

e. Allocations to Requirements. The manpower equations displayed do **not** represent requirements developed by the manpower survey process or the TRADOC Review of Manpower. Rather, *the equations represent authorizations for accomplishing the mission or function*. The MER can be converted to a manpower requirements equation by using the following method:

(1) Divide the MER “a” value (static) by the conversion factor (under the column headed "Military Auth/Req") to obtain the requirements equation “a” value.

(2) Divide the MER “b” value (variable factor) by the conversion factor to obtain the requirements equation “b” value.

(3) The following example is a conversion of the Fort Eustis base operations (325796.Z) MER to a manpower requirements equation:

Y = 133 + .015 X

133 / .76 = 175; the “a” value for requirements
.015 / .76 = .020; the “b” value for requirements

Requirements equation = 175 + .020 X

RECRUIT TRAINING (PE 312711) AND COMBINED RECRUIT AND SKILL TRAINING (PE 313761) STRUCTURE ANALYSIS

1. This methodology is used to compute manpower resource requirements for recruit training (commonly referred to as basic combat training-BCT) and Combined Recruit and Skill Training (commonly referred to as one station unit training-OSUT). Manpower resource requirements include company, battalion headquarters and brigade headquarters overhead personnel; drill instructors; and instructors in training committees outside the company.

2. Each company is designed to have 4 platoons with 3 drill instructors for each platoon. As the trainee input fluctuates, the number of companies, platoons, and drill instructors are adjusted. For "what if" drills, the following criteria should be used:

a. The number of companies required is based on structure load which is computed as input times course length in weeks (plus 2 weeks for maintenance and fill) divided by 50. A company normally has 200 trainees present (structure load)

b. **Training Company Overhead**. A training company has 2 officers and 13-16 enlisted personnel corresponding to a 4-platoon structure and a company size of 200. Platoon size for BCT is normally 50 which earns 3 Drill Sergeants or 12 per company. For OSUT, there are differences as explained below. An exception exists in Armor OSUT with 2 officers and 11-14 enlisted for 3 or 4 platoon structure and an average company size of 161 for 19D (M3 Bradley) and 19K (M1 Abrams) MOS. Armor OSUT companies also earn 1 civilian position each. Another exception exists in Engineer OSUT with 2 officers and 12-15 enlisted personnel corresponding to a 3 or 4 platoon structure and a company size of 180.

c. **Battalion Headquarters Overhead.** One battalion headquarters is authorized for 3-7 companies. A battalion headquarters has approximately 3 officers and 15 enlisted/civilians. This does not include manpower for the Unit Ministry Team which consists of a Chaplain and an assistant.

d. **Brigade Headquarters Overhead.** One brigade headquarters is authorized for 3-8 battalions. A brigade headquarters may have as many as 10 officers, 24 enlisted, and 12 civilians. Exact staffing levels are dependent upon local operating procedures and assigned missions. The number of companies, platoons, and drill instructors are adjusted as trainee input fluctuates.

3. The staffing of Committee overhead is considered fixed and is not directly dependent on load changes. Requirements for this area will change only when the company starts per week increase significantly for a sustained period of time. The Committee instructor staffing can be estimated using the following standards[1]. In the equation, Y = committee instructors and X = training company starts. (Company starts are the total number of initial entry trainees per year projected by the current ARPRINT divided by company size of 200 for all training sites.)

a. **General Subjects**

$$Y = \frac{1328 + 15.28X}{145}$$

b. **Basic Rifle Marksmanship**

$$Y = \frac{144 + 42.61X}{145}$$

c. **Combat Indoctrination**[2]

$$Y = \frac{1243 + 34.21X}{145}$$

[1]Source: HQ TRADOC, Manpower Staffing Standards, Army Training

Center, Recruit Training (Committee Group Instructors), 1 Feb 91. Several centers have additives and subtractives not listed above. Refer to the staffing standards for these adjustments.

2At Fort Benning, this committee workload is included in the AIT phase of OSUT.

OFFICER CANDIDATE SCHOOL (OCS) BRANCH IMMATERIAL (PE 311722)

Workload Factor: Average Resident U.S. Student Load

PE 311722	MER					FY 02 Structure	PERCENTAGE BREAKOUT of MANPOWER				Civilian *
OCS	Y =	a	+	b	X	Load	Off	WO	Enl	Auth/Req	Auth/Req
Benning	Y =	24	+	0.073	X	165	44.4%	0.0%	55.6%	1.00	0.67

GENERAL SKILL TRAINING (ATC) (PE 321731)

Workload Factor: Average U.S. AIT Load

PE 321731	MER					FY 02 Structure	PERCENTAGE BREAKOUT of MANPOWER				Civilian *
ATC	Y =	a	+	b	X	Load	Off	WO	Enl	Auth/Req	Auth/Req
Jackson	Y =	154	+	0.107	X	992	4.6%	1.9%	93.5%	0.94	0.69
Leonard Wood	Y =	396	+	0.173	X	1,947	4.5%	0.4%	95.1%	0.87	0.51
TRADOC Composite	Y =	550	+	0.151	X	2,939	4.5%	0.8%	94.7%	0.89	0.69

NOTES:

1. The above equation can be converted to requirements by using the methodology on page 22.
2. The MER address military only. Civilian authorizations can be obtained indirectly through application of the CER.

GENERAL SKILL TRAINING (SCHOOLS) (PE 321731)

Workload Factor: Average Resident U.S. Student Load

	PE 321731	MER					FY 02 Structure	PERCENTAGE BREAKOUT of MANPOWER			Military	Civilian *
	SCHOOL	Y =	a	+	b	X	Load	Off	WO	Enl	Auth/Req	Auth/Req
0.2	Air Defense	Y =	489	+	0.255	X	1,275	7.0%	2.8%	90.2%	0.82	0.65
0.2	ALMC	Y =	37	+	0.071	X	548	84.2%	0.0%	15.8%	0.97	0.95
0.2	Armor	Y =	1,114	+	0.781	X	1,346	6.1%	0.4%	93.5%	0.87	0.46
0.2	Aviation Logistics	Y =	94	+	0.218	X	1,399	2.3%	2.8%	94.9%	0.86	0.55
0.2	Aviation (Nonflt)	Y =	147	+	0.118	X	584	18.5%	8.3%	73.2%	0.71	0.61
0.2	CAS3	Y =	10	+	0.149	X	504	100.0%	0.0%	0.0%	0.98	1.00
0.2	Chaplain	Y =	50	+	0.051	X	146	43.9%	0.0%	56.1%	0.93	0.76
0.2	Chemical	Y =	66	+	0.055	X	304	39.8%	0.0%	60.2%	0.72	0.54
0.2	Engineer	Y =	86	+	0.073	X	546	25.4%	1.6%	73.0%	0.97	0.51
0.2	Field Artillery	Y =	512	+	0.230	X	1,648	11.4%	2.0%	86.6%	0.90	0.72
0.2	Infantry	Y =	1,124	+	0.303	X	2,736	8.1%	0.3%	91.6%	0.85	0.47
0.2	Missile & Munitions	Y =	265	+	0.225	X	1,616	8.3%	2.4%	89.3%	0.83	0.63
0.2	Military Police	Y =	110	+	0.067	X	433	21.6%	5.8%	72.7%	0.89	0.79
0.2	Ordnance	Y =	248	+	0.155	X	2,549	9.2%	2.8%	88.0%	0.89	0.47
0.2	Quartermaster	Y =	180	+	0.132	X	3,850	10.6%	1.4%	88.0%	0.82	0.67
0.2	Signal	Y =	225	+	0.136	X	4,969	6.5%	1.1%	92.4%	0.82	0.71
0.2	Transportation	Y =	184	+	0.227	X	687	13.2%	3.2%	83.5%	0.80	0.63
0.2	U.S. Army SSI	Y =	220	+	0.073	X	2,235	16.1%	0.8%	83.1%	0.85	0.67
0.2	Warrant Off Career Ctr	Y =	23	+	0.035	X	259	3.1%	84.4%	12.5%	0.57	0.00
0.4	DLI	Y =	71	+	0.037	X	3,163	18.2%	0.0%	81.8%	0.71	0.77
	TRADOC Composite	Y =	5,255	+	0.180	X	30,797	10.7%	1.7%	87.6%	0.85	0.69

NOTES:
1. NCOA/DSS and school troops manpower are included in the school equation where appropriate.
2. The above equations can be converted to requirements by using the methodology on page 22.
3. The MER address military only. Civilian authorizations can be obtained indirectly through application of the CER.
4. *Use this ratio to convert civilian authorizations to requirements.

GENERAL INTELLIGENCE SKILL TRAINING (PE 321733/34)

Workload Factor: Average Resident U.S. Student Load

PE 321733/34	MER					FY 02 Structure	PERCENTAGE BREAKOUT of MANPOWER			Military	Civilian *
SCHOOL	Y =	a	+	b	X	Load	Off	WO	En.	Auth/Req	Auth/Req
Intelligence	Y =	558	+	0.14	X	2158	10.1%	3.7%	86.2%	0.81	0.39

NOTES:

1. The above equations can be converted to requirements by using the methodology on page 22.
2. The MER address military only. Civilian authorization can be obtained indirectly through application of the CER.
3. *Use this ratio to convert civilian authorizations to requirements.

UNDERGRADUATE PILOT TRAINING (UPT) (PE 322741)
Workload Factor: Average Resident Flight Student Load

PE 322741 Fort Rucker	MER					FY 02 Structure	PERCENTAGE BREAKOUT of MANPOWER			Military	Civilian *
	Y =	a	+	b	X	Load	Off	WO	Enl	Auth/Req	Auth/Req
UPT	Y =	248	+	0.255	X	861	18.4%	42.9%	38.7%	0.85	0.54

GRADUATE PILOT TRAINING (GPT) (PE 322743)
Workload Factor: Average Resident Flight Student Load

PE 322743 Fort Rucker	MER					FY 02 Structure	PERCENTAGE BREAKOUT of MANPOWER			Military	Civilian *
	Y =	a	+	b	X	Load	Off	WO	Enl	Auth/Req	Auth/Req
GPT	Y =	179	+	0.569	X	534	8.3%	60.0%	31.7%	0.88	0.77

NOTES:

1. The above equations can be converted to requirements by using the methodology on page 22.
2. The MER address military only. Civilian authorizations can be obtained indirectly through application of the CER.
3. *Use this ratio to convert civilian authorizations to requirements.

PROFESSIONAL MILITARY EDUCATION (PE 323751)

Workload Factor: Average Resident U.S. Student Load

PE 323751	MER					FY 02	PERCENTAGE				
						Structure	BREAKOUT of MANPOWER			Military	Civilian *
SCHOOL	Y =	a	+	b	X	Load	Off	WO	Enl	Auth/Req	Auth/Req
C & GSC (Leavenworth)	Y =	125	+	0.120	X	932	82.3%	0.4%	17.3%	0.80	0.76
SMA (Bliss)	Y =	102	+	0.063	X	1,097	3.5%	0.0%	96.5%	0.96	0.43
TRADOC Composite	Y =	227	+	0.089	X	2,029	49.2%	0.2%	50.5%	0.86	0.69

NOTES:

1. The above equations can be converted to requirements by using the methodology on page 22.
2. The MER address military only. Civilian authorizations can be obtained indirectly through application of the CER.
3. *Use this ratio to convert civilian authorizations to requirements.

RECEPTION BATTALION (PE 312714)
Workload Factor: Total Receptees

PE 312714	MER					FY 02	PERCENTAGE BREAKOUT of MANPOWER				Civilian *
						Structure					
INSTALLATION	Y =	a	+	b	X	Load	Off	WO	Enl	Auth/Req	Auth/Req
Benning	Y =	11	+	0.0013	X	29,918	13.7%	0.0%	86.3%	0.74	1.00
Jackson	Y =	12	+	0.0019	X	40,400	9.0%	0.0%	91.0%	0.72	0.83
Knox	Y =	14	+	0.0016	X	15,476	7.7%	0.0%	92.3%	0.57	0.42
Sill	Y =	12	+	0.0018	X	17,592	11.6%	0.0%	88.4%	0.59	0.82
Leonard Wood	Y =	18	+	0.0012	X	23,181	10.9%	0.0%	89.1%	0.55	0.57
TRADOC Composite	Y =	67	+	0.0016	X	126,567	10.4%	0.0%	89.6%	0.64	0.75

NOTES:

1. The above equations can be converted to requirements by using the methodology on page 22.
2. The MER address military only. Civilian authorizations can be obtained indirectly through application of the CER.
3. *Use the stated ratio to convert civilian authorizations to requirements.

BASE OPERATIONS - TRADOC (PE 325796.Z)

Workload Factor: Population Supported

PE 325796.Z**	MER					FY 02 Population	PERCENTAGE BREAKOUT of MANPOWER			Military	Civilian *
INSTALLATION	Y =	a	+	b	X	Supported	Off	WO	Enl	Auth/Req	Auth/Req
Benning	Y =	229	+	0.009	X	21,490	12.6%	1.4%	86.0%	0.92	0.49
Bliss	Y =	289	+	0.013	X	11,711	8.5%	1.6%	89.9%	0.88	0.45
Carlisle Barracks	Y =	52	+	0.010	X	1,100	12.7%	0.0%	87.3%	0.85	0.51
Eustis	Y =	133	+	0.015	X	10,695	13.7%	2.1%	84.2%	0.76	0.40
Gordon	Y =	147	+	0.016	X	10,258	12.1%	1.3%	86.6%	0.73	0.50
Huachuca	Y =	304	+	0.011	X	7,715	7.7%	0.8%	91.5%	0.90	0.44
Jackson	Y =	293	+	0.011	X	13,769	12.8%	1.1%	86.1%	0.74	0.37
Knox	Y =	339	+	0.010	X	11,409	10.8%	0.9%	88.3%	0.88	0.47
Leavenworth	Y =	160	+	0.011	X	5,157	16.2%	0.5%	83.3%	0.87	0.50
Lee	Y =	187	+	0.009	X	8,433	13.1%	1.1%	85.8%	0.87	0.58
Monroe	Y =	131	+	0.019	X	2,264	12.6%	1.1%	86.2%	0.95	0.59
Presidio of Monterey	Y =	10	+	0.002	X	4,205	56.3%	0.0%	43.7%	0.94	0.38
Rucker	Y =	218	+	0.018	X	6,192	9.7%	0.9%	89.4%	0.99	0.46
Sill	Y =	136	+	0.025	X	15,702	8.4%	1.5%	90.1%	0.72	0.39
Leonard Wood	Y =	188	+	0.010	X	13,813	13.1%	1.2%	85.6%	0.77	0.42
TRADOC Composite	Y =	2816	+	0.013	X	143,913	11.4%	1.2%	87.4%	0.83	0.45

NOTES:

1. The above equations can be converted to requirements by using the methodology on page 22.
2. The MER address military only. Civilian authorizations can be obtained indirectly through application of the CER.
3. Population supported is as defined on page 18 except financed loads are used in place of ASIP student loads. Financed loads are adjusted for anticipated attrition and no-shows based on historical experience.
4. *Use the ratio provided to convert civilian authorizations to requirements.
5. **Also includes PEs 325776, 325778, 325779J, 325779M, 325719, 325720, and 324020.

SECTION II

MILITARY PERSONNEL COSTS

CIVILIAN PERSONNEL COSTS

INTRODUCTION

1. GENERAL: Section II has been prepared to assist resource analysts and other personnel in preparing timely, accurate, and consistent cost estimates. The factors can be used in developing cost estimates when direct data are not available. Care must be taken to select the correct factors and apply them properly. Rates shown are average guidelines; detailed rates pertaining to special circumstances and local situations should be developed and used as time and manpower permit.

2. PREPARATION of COST ESTIMATES: Each type of cost estimate or analysis has unique and subtle differences in content and structure. Analysts must recognize these differences to ensure that studies conform to appropriate policies, procedures, and regulations. All cost analyses should be documented to permit audit and replication of the cost estimates, cost estimating relationships, and cost factors. Examples of different types of cost estimates are:

a. Program and Budget Cost Estimates. Programming and budgeting activities are the major vehicles for obtaining annual operating funds. Program and budget estimates are to be developed in accordance with guidance provided within the program-budget organizations. Normally, these estimates will not include the unfunded portion of civilian personnel costs nor any additions to the military composite rates. The RFH may be used at programming stages, with appropriate adjustments, to estimate out-year cost issues. The figures developed on this basis should be considered a first approximation, and adjusted as more specific guidance becomes available.

b. General Economic Analyses (EAs). Economic analyses are comparisons of the relative costs and benefits of alternative courses of action. EAs assist the decision maker in selecting the best course of action to achieve certain goals. EAs postulate alternative ways of satisfying objectives, document all costs and benefits, and allow management to consider the economic aspects of decisions. EAs may be called cost-benefit studies, cost effectiveness studies, or lease versus buy analyses. See **Appendix B** for discount rates to use in economic analyses. General guidance on preparing EAs is available in **AR 11-18.**

c. Productivity Improvement Studies. Studies conducted to improve labor, real property, or equipment productivity through acquisition of capital equipment or modified resource usage patterns. These are governed by **AR 5-4.**

d. Commercial Activities Studies. CA studies are another type of specialized cost study procedures. These studies compare the cost of performance by an in-house government workforce with the cost of performance by a private sector workforce to deteremine the most efficient and cost-effective means of obtaining the required services for selected functions. Cost factors relating to the performance of CA studies are <u>not</u> included in this handbook. Refer to OMB Circular A-76 or contact HQ TRADOC DCSRM, Commercial Activities Directorate for assistance, DSN 680-2324/5109 or Comm (757) 788-2324/5109.

3. QUESTIONS: Questions and comments relative to this portion of the Resource Factors Handbook may be brought to the attention of Mr. John Atkinson, ATRM-P, Fort Monroe, VA 23651; or telephone DSN 680-4198, or by commercial telephone at (757) 788-4198.

MILITARY PERSONNEL COSTS

1. INTRODUCTION: This section deals with the Military Personnel, Army (MPA) appropriation, which includes pay and allowances, individual clothing, subsistence, PCS, travel, and other non-pay items for Army military personnel on active duty and Military Academy cadets.

2. COMPOSITE STANDARD RATES: For budgetary cost estimates, only the Composite Standard Rates should be used. The latest full composite rates for each service can be found at Tab K in the following site: http://www.dtic.mil/comptroller/rates. A more detailed breakout of the Army composite standard rates follow this narrative. They include basic pay, BAQ, incentive and special pay, retirement, PCS, and certain other expenses paid by MPA funds. Each type of entitlement and composition of the standard rate is explained below.

a. The Basic Pay portion is a weighted average for longevity increments for each pay grade, as provided in the President's budget.

b. The Retired Pay portion is an amount established by the Congressional Budget Office and is currently about **32.1 percent** of the basic pay rate.

c. The Basic Allowance for Quarters (BAQ) portion is provided for in the President's budget justification for quarters allowance and represents the average cost for a military person in each pay grade.

d. The Miscellaneous portion represents the average cost, computed separately for officer and enlisted personnel, provided for in the budget justification. Examples include subsistence (cash and in-kind), station allowances overseas, uniform and clothing allowances, family separation allowances, separation payments, social security tax (FICA), death gratuities, Servicemen's Group Life Insurance, reenlistment and enlistment bonuses, etc.

e. The Permanent Change of Station (PCS) portion represents the average cost, computed separately for officer and enlisted personnel, of amounts provided for in the budget justification for permanent change of station travel.

f. Incentive and Special Pay represents the average cost, computed separately for officer and enlisted personnel, provided for in the budget justification. Examples include air crew duty, hazardous duty, physician and dentist incentive pay, duty at certain locations, proficiency pay, and hostile fire pay.

3. OTHER COSTS: For economic/cost analyses, quarters allowance and medical benefits costs must be added to the Composite Standard Rates. Other non-MPA costs for that portion of quarters allowance, subsistence, medical, and other costs are not included in the Composite Standard Rates.

4. CAUTION: Users of this handbook are cautioned to exercise care in the application of Composite Standard Rates for costing military personnel. These rates should not be confused with base pay rates, since they are determined by factoring additional amounts to the base pay, such as station and uniform allowances, family separation, subsistence, BAQ, FICA, incentive and special pay, PCS, and retirement costs.

Fiscal Year 2001
Annual Composite Standard Rates

Effective 1 October 2000

Pay Grade	Basic Pay	Retired Pay Accrual	BAQ	PCS	Incremental	MISC	Annual Composite Std Rate
O-10	$110,700	$32,767	$1,909	$3,392	$12,727	$6,000	**$167,495**
O-9	110,700	32,767	1,725	3,392	8,100	5,875	**162,559**
O-8	110,487	32,704	2,871	3,392	7,564	5,861	**162,879**
O-7	98,928	29,283	3,895	3,392	5,425	5,908	**146,831**
O-6	84,102	24,894	11,410	3,392	14,090	5,869	**143,757**
O-5	68,131	20,167	12,123	3,392	9,372	5,239	**118,424**
O-4	56,659	16,771	9,948	3,392	9,358	4,358	**100,486**
O-3	45,240	13,391	8,068	3,392	5,770	3,481	**79,342**
O-2	34,936	10,341	6,569	3,392	4,411	2,690	**62,339**
O-1	26,432	7,824	5,207	3,392	2,900	2,037	**47,792**
W-5	60,292	17,846	10,943	3,392	6,344	4,638	**103,455**
W-4	51,360	15,203	9,156	3,392	6,209	3,951	**89,271**
W-3	41,725	12,351	7,859	3,392	11,219	3,212	**79,758**
W-2	34,671	10,263	6,431	3,392	9,688	2,670	**67,115**
W-1	28,749	8,510	5,309	3,392	3,243	2,214	**51,417**
E-9	45,516	13,473	6,842	2,062	5,645	3,669	**77,207**
E-8	37,035	10,962	7,588	2,062	5,605	3,028	**66,280**
E-7	31,042	9,188	6,507	2,062	5,492	2,574	**56,865**
E-6	25,784	7,632	5,263	2,062	5,904	2,176	**48,821**
E-5	21,279	6,299	3,712	2,062	5,542	1,835	**40,729**
E-4	17,586	5,205	2,423	2,062	5,358	1,556	**34,190**
E-3	14,455	4,279	1,470	2,062	5,085	1,319	**28,670**
E-2	13,899	4,114	1,057	2,062	5,014	1,276	**27,422**
E-1	13,258	3,924	1,305	2,062	8,538	1,228	**30,315**
CADET	7,200			136		3,126	**10,462**

NOTES:

1. **The BAQ costs shown here include VHA.**
2. **These factors provided by ABO on 26 Feb 01.**
3. **Incremental corresponds to the old cateogy of Incentive & Special Pay.**
4. **MISC component includes subsistence allowance.**

COMPOSITE STANDARD RATES
For Costing Military Personnel Services

Effective 1 October 2000

Pay Grade	Rank	Annual Rate	Monthly Rate	Weekly Rate	Daily Rate (see note 3 below)	Daily Rate	Hourly Rate
O-10	GEN	$110,700	$9,225	$2,129	$303	$426	$53.22
O-9	LTG	110,700	9,225	2,129	303	426	53.22
O-8	MG	110,487	9,207	2,125	303	425	53.12
O-7	BG	98,928	8,244	1,902	271	380	47.56
O-6	COL	84,102	7,009	1,617	230	323	40.43
O-5	LTC	68,131	5,678	1,310	187	262	32.76
O-4	MAJ	56,659	4,722	1,090	155	218	27.24
O-3	CPT	45,240	3,770	870	124	174	21.75
O-2	1LT	34,936	2,911	672	96	134	16.80
O-1	2LT	26,432	2,203	508	72	102	12.71
W-5	CW5	60,292	5,024	1,159	165	232	28.99
W-4	CW4	51,360	4,280	988	141	198	24.69
W-3	CW3	41,725	3,477	802	114	160	20.06
W-2	CW2	34,671	2,889	667	95	133	16.67
W-1	CW1	28,749	2,396	553	79	111	13.82
E-9	SGM	45,516	3,793	875	125	175	21.88
E-8	MSG	37,035	3,086	712	101	142	17.81
E-7	SFC	31,042	2,587	597	85	119	14.92
E-6	SSG	25,784	2,149	496	71	99	12.40
E-5	SGT	21,279	1,773	409	58	82	10.23
E-4	CPL	17,586	1,466	338	48	68	8.45
E-3	PFC	14,455	1,205	278	40	56	6.95
E-2	PVT	13,899	1,158	267	38	53	6.68
E-1	PVT	13,258	1,105	255	36	51	6.37
CADET		7,200	600	138	20	28	3.46

NOTES:

1. These are NOT base pay rates. They include retired pay accrual, BAQ, PCS, and other allowances. See p for breakout.
2. Weekly rates based on 52 weeks per year.
3. Two sets of daily rates are shown, one based on a 365 day year, and another based on 260 working days
4. Hourly rates are based on 2080 work hours.

COMPUTATION OF BENEFIT COSTS
FOR SERVICES OF MILITARY PERSONNEL

1. Cost of military personnel services to be included when computations are based on man-years:

	OFFICER	**ENLISTED**
a. Annual Rate from Compostie Pay Table	(**Refer to Composite Pay Table)**	
b. Other Personnel Benefits	6% of para. 1a	18% of para. 1a
c. Total Benefits	6% of para. 1a	18% of para. 1a

2. Cost of military personnel services to be included when computations are based on direct hours:

	OFFICER	**ENLISTED**
a. Hourly Rate based on Composite Rate	**(Refer to Composite Pay Table)**	
b. Leave and Holiday Benefits	14% of para. 2a	14% of para. 2a
c. Other Personnel Costs	6% of 2a & b	18% of 2a & b
d. Total Benefits	20.84% of 2a	34.52% of 2a

NOTES:

1. **Please note that military composite rates represent more than simple base pay. Allowances are included for Retired Pay Accrual, BAQ, PCS, Incentive, and other special pay types.**
2. **Direct labor hours are actual hours worked.**

EXAMPLE
AVERAGE MPA COST PER MILITARY SPACE

The procedure outlined below represents the methodology used to determine the average military salaries shown on pages XX - XX in this handbook. Basically, for each class of military personnel (OFF, WO, ENL), the authorized positions at each pay grade are multiplied by the corresponding composite rates. The sum of these products is then divided by the sum of the authorizations to determine the average salary for the personnel class. For the MAGG, or weighted average of all military personnel, the sum of the products for all classes is divided by the total military authorizations.

OFFICERS

Pay Grade	Composite Rate	No. of Auth	Total Dollars
O-2	$ 59,445	1	$ 59,445
O-3	$ 78,601	18	$ 1,414,818
O-4	$ 93,561	5	$ 467,805
O-5	$ 111,380	5	$ 556,900
O-6	$ 135,174	2	$ 270,348
Total		31	$ 2,769,316

AVERAGE OFFICER SALARY = $ 89,333

ENLISTED

Pay Grade	Composite Rate	No. of Auth	Total Dollars
E-3	$ 28,145	5	$ 140,725
E-4	$ 33,251	21	$ 698,271
E-5	$ 39,867	18	$ 717,606
E-6	$ 47,403	40	$ 1,896,120
E-7	$ 54,940	15	$ 824,100
E-8	$ 63,624	5	$ 318,120
E-9	$ 76,121	3	$ 228,363
Total		107	$ 4,823,305

AVG ENLISTED SALARY = $ 45,078

WARRANT OFFICERS

Pay Grade	Composite Rate	No. of Auth	Total Dollars
W-2	$ 69,844	2	$ 139,688
W-3	$ 79,091	3	$ 237,273
W-4	$ 87,513	2	$ 175,026
W-5	$ 97,890	1	$ 97,890
Total		8	$ 649,877

AVG WARRANT OFF SALARY = $ 81,235

MAGG

Class	Total Authorizations	Total Dollars
Officers	31	$ 2,769,316
Warrant Officers	8	$ 649,877
Enlisted	107	$ 4,823,305
Total	146	$ 8,242,498

AVERAGE MAGG SALARY = $ 56,455

NOTE: This sample based on actual calculations used for the US Army Military Police School, Ft Leonard Wood (AMS 321731.2)

PERMANENT CHANGE OF STATION (PCS)
COST FACTORS
MILITARY PERSONNEL

1. INTRODUCTION: This section contains guidance on computing detailed PCS cost estimates. It includes factors for use when the average grade of the individuals is known or unknown. The method described in paragraph 3 below is preferred, but use of the average cost factors in paragraph 2 is acceptable when the grade structure cannot be readily determined.

2. AVERAGE PCS COST:

a. Officer and enlisted factors are shown below following paragraph 4..

b. These factors may be used when the officer grade structure and the enlisted grade structure are unknown. The mix of married and unmarried personnel has been taken into account in the computation of the average rates.

c. Determine the applicable rate based on type of move as defined below.

(1) ***Accession Travel***

Officer

(a) Appointees to a commissioned grade from civilian life, military academies, ROTC, and Army Reserve and Army National Guard officers called or recalled to extended duty from home or point where orders were received to first permanent duty station or training school of 20 weeks or more duration; and

(b) New permanent duty station or training school of 20 weeks or more duration. (This includes officers appointed from enlisted status upon graduation from OCS. Also included is travel to/from schools less than 20 weeks when it precedes completion of travel to the new permanent duty station or training school in excess of 20 weeks.)

Enlisted

(a) Enlistees and prior service personnel from recruiting station or place of enlistment to first permanent duty station or training school of 20 weeks or more duration; and

(b) Recalled enlisted reservists from home to first permanent duty station or training school of 20 weeks or more duration. (This also includes travel to/from schools less than 20 weeks when it precedes completion of travel to the new permanent duty station or training school in excess of 20 weeks.)

(2) ***Operational Travel***

Officer and Enlisted

(a) To and from permanent duty stations located within the United States;

(b) To and from permanent duty stations located within an overseas area when no transoceanic travel is involved; and

(c) Dependents, household goods, personal effects, trailer allowances, and privately owned vehicles of soldiers who are interned, missing, or captured when no transoceanic travel is involved.

(3) ***Training Travel***

Officer

(a) From previous permanent duty station to formal service or civilian schools, including technical schools, flight training schools, factory training and other approved courses of instruction, of 20 weeks duration or more; and

(b) School graduates and those eliminated from school to their next permanent CONUS duty station. (Excludes USMA graduates, OCS graduates, ROTC graduates, and others chargeable as Accession Travel.)

Enlisted

(a) From previous CONUS permanent duty station to formal service or civilian schools, including technical schools, flight training schools, factory training and other approved courses of instruction, of 20 weeks duration or more;

(b) School graduates and those eliminated from school to their next permanent CONUS duty station; and

(c) Personnel ordered to training leading to a commission, if such training period is of 20 weeks or more.

(4) ***Separation Travel***

Officer and Enlisted

(a) Upon release or separation from the service from last permanent duty station to home of record or entry into service or to home of selection when authorized by law; and

(b) Dependents, household goods, trailer allowances, and personal effects of deceased soldiers.

(5) ***Rotational Travel***

Officer and Enlisted

(a) From permanent duty stations in CONUS to permanent duty stations overseas;

(b) From permanent duty stations overseas to permanent duty stations in CONUS;

(c) From permanent duty stations in one overseas area to permanent duty stations in another overseas area when transoceanic travel is involved; and

(d) Dependents, household goods, personal effects, trailer allowances, and privately owned vehicles of soldiers who are interned, missing, or captured when transoceanic travel is involved.

(6) ***Unit Travel***

Officer and Enlisted

(a) Soldiers directed to move as members of an organized unit movement; and

(b) Fillers and replacements directed to move as part of a unit move.

3. PCS COST by GRADE LEVEL:

a. When the grade structure can be identified, cost estimates should be based upon the provisions of Joint Federal Travel Regulations (JFTR) as follows:

(1) *Travel Allowance.* Determine from Chapter 5.

(2) *Household Goods (HHG) Shipment.* Determine weight allowance from Chapter 5, part D.

(3) *Dislocation Allowance.* Determine from Chapter 5, part G.

b. Determine the mileage from the old duty station to the new duty station using **AR 55-60** and compute the cost as follows:

(1) ***Travel Allowance.*** Multiply the applicable rate per individual by the distance traveled and then multiply the result by the number of personnel PCS at the given grade level. Determine the travel allowance for dependents in a similar manner and add results to the PCS allowance computed for active duty soldiers.

(2) ***HHG Shipment.*** Multiply the applicable weight allowance (in pounds) by the appropriate factor for HHG. Multiply the result by the number of personnel at the given grade level. Repeat this procedure for other grade levels affected. Sum the result.

(3) ***Dislocation Allowance.*** The amount payable is **2.5** times the monthly basic allowance for quarters (BAQ) rate for the pay grade in question. Multiply the appropriate amount by the number of personnel PCS in the given grade level. Repeat this procedure for each grade affected. Sum the results. (**NOTE:** The variable housing allowance does not affect dislocation allowance.)

(4) The sum of (1), (2), and (3) above for all grade levels is the estimated PCS cost for the proposed action.

4. *Number of military PCS chargeable to realignment.* Assume **75%** of the organization's strength will result from realignment while **25%** is normal unit turnover. Local estimates which differ can be used if sufficiently documented.

MILITARY PCS FACTORS

	FY 00		FY 01		FY 02	
Type of Move	**Officer**	**Enlisted**	**Officer**	**Enlisted**	**Officer**	**Enlisted**
ACCESSION	$4,146	$1,564	$4,214	$1,585	$4,275	$1,603
TRAINING	5,110	4,197	5,211	4,269	5,311	4,347
OPERATIONAL	9,517	5,677	9,691	5,786	9,865	5,892
ROTATIONAL	14,121	7,642	14,420	7,711	14,664	7,841
SEPARATION	4,241	1,793	4,272	1,815	4,334	1,839
UNIT	5,314	3,136	5,411	3,205	5,544	3,273

Source: DAPE-MBB

CIVILIAN PERSONNEL COSTS INTRODUCTION

1. This section contains information about civilian pay and benefits, and includes computational examples of civilian pay and benefit costs. General schedule pay tables by locality can be accessed from the web using the following: http://www.opm.gov/oca/01tables/GSannual/gsannpdf/01SALTBL.pdf Wage grade pay can be found at: http://www.cpms.osd.mil/wage/scheds/afusa.htm Other pay and benefit data are contained in tables which follow this introduction.

2. This section also includes factors for civilian permanent change of station, temporary quarters allowance, reductions and realignments, home owner's assistance, and average salary by installation by function.

COMPENSATION SCHEDULE FOR GS EMPLOYEES

(REST–of–U.S. (RUS) Schedule Effective Jan 00)

	Based on Step 5					*Based on Actual Personnel Distribution*				
	Annual	**Monthly**	**Weekly**	**Daily**	**Hourly**	**Annual**	**Monthly**	**Weekly**	**Daily**	**Hourly**
GS-01	$16,780	$1,398	$323	$65	$8.04	$14,810	$1,234	$285	$57	$7.10
GS-02	18,267	1,522	351	70	8.75	17,561	1,463	338	68	8.41
GS-03	20,590	1,716	396	79	9.87	21,522	1,794	414	83	10.31
GS-04	23,116	1,926	445	89	11.08	24,391	2,033	469	94	11.69
GS-05	25,860	2,155	497	99	12.39	27,391	2,283	527	105	13.12
GS-06	28,826	2,402	554	111	13.81	30,728	2,561	591	118	14.72
GS-07	32,032	2,669	616	123	15.35	33,381	2,782	642	128	15.99
GS-08	35,476	2,956	682	136	17.00	38,036	3,170	731	146	18.23
GS-09	39,184	3,265	754	151	18.78	40,509	3,376	779	156	19.41
GS-10	43,154	3,596	830	166	20.68	46,096	3,841	886	177	22.09
GS-11	47,412	3,951	912	182	22.72	48,752	4,063	938	188	23.36
GS-12	56,823	4,735	1,093	219	27.23	59,018	4,918	1,135	227	28.28
GS-13	67,571	5,631	1,299	260	32.38	69,921	5,827	1,345	269	33.50
GS-14	79,849	6,654	1,536	307	38.26	81,521	6,793	1,568	314	39.06
GS-15	93,926	7,827	1,806	361	45.01	96,923	8,077	1,864	373	46.44

NOTES:

1. **Actual average salaries by grade computed using ACPERS profile of TRADOC employees as of 31 March 00 (Source: ATBO-CP).**
2. **Monthly Rate = 1/12 Annual Rate; Weekly Rate = 1/52 Annual Rate; Daily Rate = 1/260 Annual Rate; Hourly Rate = 1/2087 Annual Rate. The 2087 hours represent a Congressionally mandated workyear and include non-productive hours. The total productive hours per year is 1740, which takes into account holidays and other non-available hours such as leave, training, PCS, organizational duties, etc.**

COMPUTATION of BENEFIT COSTS FOR SERVICES of CIVILIAN PERSONNEL

1. Cost of civilian personnel services to be included when compuatations are based on work-years:

a. Annual rates from pay tables		
b. DoD funded civilian retirement cost		**16.73%** of a
c. Other funded benefits		**9.51%** of a
FEGLI	*0.19*	
FEGHB	*6.43*	
FECA	*2.39*	
Uniform Allowance, PCS, COLA, Recruitment bonuses	*0.50*	
	9.51	
d. Unfunded retirement		**9.60%** of a
e. TOTAL BENEFITS		
Funded		**26.24%** of a
Funded + Unfunded		**35.84%** of a

2. Cost of civilian personnel services to be included when computations are based on direct hours:

a. Hourly rates from pay tables	
b. Leave & Holiday Pay	**18.00%** of a
c. DoD funded civilian retirement costs	**16.73%** of a & b
d. Other funded benefits	**9.51%** of a & b
e. Unfunded retirement	**9.60%** of a & b
f. TOTAL BENEFITS	
Funded	**48.96%** of a
Funded + Unfunded	**60.29%** of a

NOTES:

1. Funded benefit factors were developed using FY00 STANFINS obligation data. Benefits were identified according to Element of Resource (EOR) codes found in DFAS Manual 37-100-00. Benefit factors represent TRADOC composite benefit rates for GS employees of all work schedules (Full Time Permanent, Full Time Temporary, Part Time, and Intermittent). For a detailed listing of funded benefit factors as well as premium pay, by installation and employee classification, see the next page.
2. The funded retirement factor includes CSRS, FERS Basic, FERS Thrift Savings Plan, NAF 401K, and FICA benefits.
3. Unfunded retirement represents additional costs to the government beyond employee and DoD contributions. These costs are only included when performing a cost or economic analysis. Program and budget estimates should not include these costs. See *http://www.dtic.mil/comptroller/rates/2001_d.pdf*
4. Direct labor hours are actual hours worked.

FUNDED BENEFITS & PREMIUM PAY
AS A PERCENTAGE OF BASE PAY

	GENERAL SCHEDULE (GS)		WAGE BOARD (WB)		ALL CLASSES	
	FUNDED BENEFITS	PREMIUM PAY	FUNDED BENEFITS	PREMIUM PAY	FUNDED BENEFITS	PREMIUM PAY
BENNING	27.91	4.74	27.47	7.95	27.81	5.67
BLISS	33.41	4.21	26.65	16.06	31.77	6.99
CARLISLE	23.95	1.78	22.74	3.01	23.99	1.98
EUSTIS	24.84	4.24	25.62	14.09	24.93	5.27
GORDON	22.93	2.82	25.02	5.17	23.07	2.88
HQ ACTIVITIES	21.65	2.50			21.66	2.50
HUACHUCA	26.70	3.02	25.75	3.66	26.64	3.04
JACKSON	26.79	2.02	25.99	9.53	26.59	3.88
KNOX	29.71	2.49	24.69	5.78	28.10	3.53
LEAVENWORTH	23.16	1.75	24.45	3.96	23.33	2.07
LEE	22.77	2.29	23.00	9.27	22.80	2.92
McCLELLAN	57.60	8.34	28.53	4.10	55.28	8.00
MONROE	26.46	2.44	27.82	12.99	26.68	3.99
PRES OF MONTEREY	30.74	3.74	26.51	3.05	27.72	3.51
RUCKER	26.66	2.78	27.93	8.34	26.82	3.43
SILL	30.43	2.57	25.43	6.03	29.55	3.19
LEONARD WOOD	25.02	1.75	25.86	1.83	25.16	1.76
COMPOSITE	26.24	3.02	25.87	7.73	26.13	3.63

NOTES:

1. All information here is based on FY00 year end obligations from STANFINS.
2. Detailed benefit factors by installation, employee classification, and work schedule are available upon request.
3. Premium Pay includes overtime, awards, terminal leave, holiday, Sunday, night differential, hazardous duty, overseas pay, post differential pay, remote work site allowances, plus other categories which are beyond the scope of basic pay.

CIVILIAN PERSONNEL COSTS EXAMPLES

COMPUTATION EXAMPLE #1

Situation: Project requires three man-years (one GS-12/5 & two GS-5/5)

		GS-12/5	GS-5/5
a. Annual Salary Cost from the Civilian Compensation Schedule		$56,823	$25,860
b. Multiply by number of man-years		X 1	X 2
c. Salary Cost (MY x Annual Rate)		$56,823	$51,720
d. DoD Funded Retirement	**16.58% of c**	$9,421	$8,575
e. Other Funded Benefits	**9.43% of c**	$5,358	$4,877
f. Unfunded Retirement	**16.70% of c**	$9,489	$8,637
g. Total Funded Cost **(c + d + e or**	**1.2601 of c)**	$71,603	$65,172
with Unfunded Retirement **(c + d + e + f or**	**1.4271 of c)**	$81,092	$73,810

COMPUTATION EXAMPLE #2

Situation: Project requires 100 direct hours of civilian effort (GS-12/5)

a. Hourly Rate (Step 5) ($56,823 /2087)		$27.23
b. Direct Labor Hours		X 100
c. Salary Cost		$2,723
d. Leave and Holiday	**18.00% of c**	$490
	(Total of c & d)	$3,213
e. DoD Funded Retirement Costs	**16.58% of c + d**	$533
f. Other Funded Benefits	**9.43% of c + d**	$303
g. Unfunded Retirement	**16.70% of c + d**	$537
h. Total Funded Cost **(c + d + e + f or**	**1.487 of c)**	$4,048
with Unfunded Retirement **(c + d + e + f + g or**	**1.684 of c)**	$4,585

OTHER CIVILIAN PERSONNEL COST FACTORS

1. Permanent Change of Station

a. *Travel to Seek Residence.* Use maximum allowable per diem for the days (including travel time) plus round trip mileage at the appropriate rate or round trip airfare.

	Mileage Rate	Per Diem
Employee	$ 0.15	$85.00
Employee w/spouse	0.17	Spouse accompanied by the employee, $63.75. Spouse unaccompanied by employee, up to $85.

b. *Expenses Related to Sale and Purchase of Home*. Maximum allowable expenses are:

(1) **10%** of **selling** price of old residence. Under the old DARSE (Department of Army Relocation Services for Employees) Program, eligible homeowners received relocation services in lieu of real estate reimbursement. In April 1995, the National Relocation Program was established with the Corps of Engineers as the executive agent. Associates Relocation Management Company (ARMCO) has been contracted to provide services DoD-wide. Registration costs are currently $300. The guaranteed home sale rate is now 20.84% of the appraised home value. Amended value purchase percentage is now 12.43%. The anticipated handbook has not yet materialized, although little change is expected from the eligibility criteria which applied under DARSE.

Eligibility Criteria for the National Relocation Program (NRP):

(a) Employee's new position is SES (Senior Executive Service).
(b) Move is the result of a mandatory Mobility Agreement.
(c) Move is the result of a Management Directed Action (i.e., RIF, base closure, etc.)
(d) Local Commander (or designee) has determined that relocation services should be offered as an additional recruitment incentive to fill the position and funds are available.

(2) **5%** of **purchase** price of new residence.

c. *Movement of Household Goods (HHG).* Maximum weight allowance for an employee with or without dependents is **18,000** lbs. The dollar rates may be assumed to be equal to **65%** of the operational PCS factor for officers.

d. *Mileage and Per Diem for PCS.* Extract authorized mileage from **AR 55-60** to compute mileage allowance. Compute the number of days per diem authorized on the basis of travel at the rate of 350 miles per day. Apply the rates in the following table.

	Mileage Rate	Per Diem not to exceed the following maximums
Employee	$0.15	$85.00
Employee + 1 dependent	0.17	Spouse accompanied by employee, $63.75.
Employee + 2 dependents	0.19	Each family member over 12 years of age, $63.75.
Employee + 3 dependents	0.20	Each family member under 12 years of age, $42.50.

e. *Miscellaneous Expenses Incident to Relocation.* Employees with dependents **$700** ; single employee **$350**.

2. Temporary Quarters Allowance. Maximum initial period is **60** days. Total maximum allowance is **120** days. The allowance is computed as actual expenses up to the following maximums based on percentages of daily rate of per diem of **$85** in CONUS. (The limit on PCS in CONUS is $85.)

	First 30 days (per day)	Second 30 days (per day)	Additional 60 days (per day)	MAXIMUM (120 days)
Employee or unaccompanied spouse	$85.00	$63.75	$63.75	$8,287.50
Spouse accompanying employee	63.75	42.50	42.50	5,737.50
Dependents 12 or older	63.75	42.50	42.50	5,737.50
Dependents under 12	42.50	34.00	34.00	4,335.00

3. Reduction/Realignment Information and Impact Estimates. Reductions are actions resulting in involuntary separation of civilian employees through reduction in force (RIF) actions. Realignments are actions involving closure or reduction of the level of activity of an installation, transfers, consolidations, and actions which entail inactivation or relocation of all or portions of any Active Army unit or TDA activity. All career employees will be given maximum assistance in continuing their careers as employees of the Federal Government through reassignment to other positions in the Department of Defense or other Federal agencies. Employees whose jobs are transferred to other locations will be given the opportunity to transfer with their jobs. The costs of transporting them, their families, and households to new locations will be paid by the Government. Employees whose jobs are eliminated will be given priority rights to other vacant positions in the DoD and in other Federal agencies.

a. *Reduction in Force.* A career employee who is separated by reduction in force in most circumstances is entitled by law to either an immediate retirement annuity or severance pay (but not both). The amount of annuity or severance pay is determined by age and length of service.

b. Employees meeting any of the following age and length of service combinations can retire on immediate annuities without any reduction due to age:

Age	**Years of Service**
55	30
60	20
62	5

c. A career employee who is not eligible for an immediate annuity and is separated by reduction in force is generally entitled to severance pay, unless he is already drawing a Government annuity from other service, such as military service. The maximum severance pay allowance is **one** year's pay.

d. An employee receives a week's salary for each year of the first **10** years of service; two week's salary for each year of service after 10 years; and an age adjustment allowance of **10%** of the total basic severance allowance for each year by which the employee's age exceeds **40.**

e. Separated employees may receive a lump sum payment for their accumulated annual leave. Unused leave can accumulate to a total of **240** hours or **30** days. For CSRS employees who retire on an immediate annuity, the number of days of sick leave accumulated is credited toward the computation of their years of service for a retirement annuity.

f. Refer to the hypothetical examples of civilian PCS and RIF costs at the end of this section.

g. *Disposition of civilian employees.* The servicing civilian personnel advisory center (CPAC) can develop estimates of the number of persons who will retire, transfer, find other employment, and decline to transfer. If this information cannot be obtained in a timely fashion, then the analyst should make assumptions. The following represent the best judgment of HQ TRADOC cost estimators based on past experience.

	Terminal Leave	Severance Payments
Major HQ Installations. On an installation housing a tenant activity commanded by a LTG or higher.	Avg Grade: GS-8, step 5 Accrued Leave: 240 hours	Avg Grade: GS-8, step 5 Federal Service: 15 years
All Other Installations.	Avg Grade: GS-5, step 5 Accrued Leave: 240 hours	Avg Grade: GS-5, step 5 Federal Service: 15 years

4. Homeowner's Assistance Program.

a. *Caution.* Care should be exercised to ensure that cost estimates associated with the homeowner's assistance program (military and civilian combined) are not duplicated by those civilian personnel PCS costs identified as "Expenses Related to Sale and Purchase of Home" as outlined in paragraph d below. These costs are mutually exclusive.

b. *Background.* Homeowner's Assistance is a program designed to assist eligible military and homeowners when the real estate market is adversely affected by the closure or by the reduction in scope of operations at a military base or installation under provisions of **Public Law 89-754**.

c. *Eligibility Requirements.* To be eligible:

(1) There must have been a military base closure, reduction, or realignment action of sufficient magnitude to result in an adverse effect on real estate prices in the area of the base. Announcement of a plan to study closure of a base does not qualify as a closure action until such time as closure is ordered.

(2) At the time of the notification of transfer, or termination of employment, the homeowner must have been the owner-occupant of a one or two family dwelling (or must have left it after being ordered into on-base housing) 6 months before the announcement date.

(3) The homeowner must have served or have been employed at or near the base involved in the closure or reduction action at the time of the announcement, or must have been transferred from such installation within 6 months prior to the announcement of action, or must have been transferred from such installation on an overseas tour, unaccompanied by dependents, within 15 months prior to the announcement.

(4) The homeowner's new employment must be located beyond a normal commuting distance from the dwelling for which assistance is being sought, or the homeowner must be unemployed involuntarily and able to demonstrate such financial hardship that he or she is unable to meet mortgage payments and related expenses.

d. *Homeowner's Assistance vs Sale and Purchase.* Costs associated with homeowner's assistance should be identified only when the criteria described in paragraph 4c. above have been met; e.g., base closure actions. Realignment actions would not normally meet the criteria for homeowner assistance.

(1) **Sale and Purchase of Home.** This cost is applicable to civilian personnel only. Office of Personnel Management regulations provide for payment of certain expenses incident to selling a residence at the old duty station and buying another residence at the new duty station when PCS is involved. There is no equivalent provision for military personnel expenses related to sale and purchase of a home.

(2) Since civilian personnel would probably be affected by one but not both of these programs, each program should be considered and a determination made as to which is applicable for a given study to avoid duplication.

e. *Benefits.* If eligible, the homeowner may choose to:

(1) **Take a cash payment** as described below to cover a portion of the losses resulting from a private sale, or

(2) **Sell the property** to the government, or

(3) **Be reimbursed for losses** incurred or which will incur as a result of the foreclosure of a mortgage on the dwelling.

PRIVATE SALE. If the homeowner has sold the dwelling, the amount to be paid to the homeowner cannot be more than the difference between **(a) 95%** of the fair market value of the property before the announcement date and **(b)** the fair market value at the time of the sale (or the actual sales price, whichever is higher). All values are determined by the government on the basis of comparable sales. If the homeowner can show that he or she has made a reasonable effort to sell the property and has obtained the most favorable price that he or she could be expected to receive, the sale price will normally be accepted as representing the fair market value. Although prior approval of a proposed sale price is not required to qualify a homeowner for assistance, it is in the homeowner's best interest to obtain prior approval of the sale price from the District Engineer processing the application, if possible, and to maintain a record of all sale efforts. Private sale relief is ordinarily the most favorable type of relief a homeowner can obtain under the program and, at the same time, is least expensive to the government.

SELLING TO THE GOVERNMENT. If the homeowner still owns the dwelling and wishes to sell it to the government, the amount to be paid to the homeowner cannot be more than **90%** of the fair market value of the property before the announcement, less the amount of outstanding mortgage balances, which the government will take over. If the outstanding mortgage balances are greater than **90%** of the fair market value, the government will take over the property and the homeowner's mortgage liabilities, but it will not give the homeowner any cash payment. The government cannot buy properties under circumstances where there has been an insufficient decline in value to affect sale price demonstrably (normally 5% or more). In order to sell property to the government, the homeowner must be able to demonstrate that there is no reasonable market for the property due to the announced closure or reduction action. This can most readily be done by providing evidence of efforts to sell the property to others at a reasonable sale price before offering it to the government. In foreign countries, off-base housing cannot be acquired by the government.

FORECLOSURE. At the beginning of the program, many persons now eligible for assistance had already lost their homes through foreclosures. Since implementation of the DoD Homeowner's Assistance Program, making application for foreclosure relief has become the rule rather than the exception. If for some reason a homeowner has not qualified for assistance in time to avoid foreclosure and is found eligible for such assistance, he or she may be reimbursed for **(a)** direct costs of the foreclosures and expenses and liabilities enforceable under the terms of the loan agreement for the house, or **(b)** debts established against the homeowner by a federal agency. If these debts have not yet been paid, the government may pay them on the homeowner's behalf.

f. *Cost by Appropriation.* Homeowner's Assistance is a federal program funded by the Department of Housing and Urban Development (HUD) and administered, where appropriate, by DoD. The revolving fund account for this program is **97X4090** - Homeowner's Assistance Fund, Defense. The program encompasses eligible military and civilian personnel alike and, therefore, does not differentiate between MPA and OMA appropriations from which their expenses (such as pay and allowances, PCS, etc.) are funded. Accordingly, costs associated with this program should be separately identified when stratifying total costs of the proposed action by appropriation.

SOURCES: AR 405-16 and PL 89-754.

HYPOTHETICAL EXAMPLE OF CIVILIAN PCS COSTS

Assumption: There are 27 civilian employees. Fifteen are married. There are 6 dependents age 12 or older. There are 11 dependents under the age of 12. Two-thirds of the employees are homeowners. Additionally, there are five GS 5/5 employees with 15 years of service who will be terminated.

CIVILIAN PCS

1. ***Travel to Seek Residence***

a. Married Employees

Mileage $0.17 x 2000 miles	$340 x 15 = $ 5,100
Per Diem ($85 + $63.75) x 6 days	$892.50 x 15 = $13,388

b. Single Employees

Mileage $0.15 x 2000 miles	$300 x 12 = $ 3,600
Per Diem $85 x 6 days	$510 x 12 = $ 6,120

2. ***Sale and Purchase of Home*** **(assume avg home price of $110,000)**

a. Relocation Services (assume NRP eligible; amended factor)

$110,000 x 0.1234 + $300	$13,973 x 18 = $251,514

b. Buying Expense

$110,000 x 0.05	$ 5,500 x 18 = $ 99,000

3. ***Movement of Household Goods***

65% of Officer Operational PCS Cost $6,186 x 27 = $167,023

4. ***PCS Travel***

a. Married Employees

$0.19 per mile x 1000 miles		$190 x 15 = $2,850
Daily Per Diem		
Employees	$85 x 3 days	$255 x 15 = $3,825
Spouses	63.75 x 3 days	$191.25 x 15 = $2,869
Dep 12+	63.75 x 3 days	$191.25 x 6 = $ 1,148
Dep < 12	42.5 x 3 days	$127.50 x 11 = $1,403

b. Single Employees

$0.15 per mile x 1000 miles		$150 x 12 = $1,800
Daily Per Diem	$88 x 3 days	$255 x 12 = $3,060

5. ***Temporary Quarters Allowance.*** The total maximum allowance is 120 days. To see how the allowance is computed, go to the next page. (100% is $85 or the daily rate of per diem in CONUS)

CIVILIAN PCS EXAMPLE (cont.)

First 30 Days	Second 30 Days	Add'l 60 Days	Max Cost/ Indiv	Number Of Indiv	Total Cost
a. Employees					
100%	75%	75%			
$85	$63.75	$63.75			
$2,550	$1,913	$3,825	$8,288	x 27	= $223,763
b. Spouses					
75%	50%	50%			
$63.75	$42.50	$42.50			
$1,913	$1,275	$2,550	$5,738	x 15	= $ 86,063
c. Dependents 12 or older					
75%	50%	50%			
$63.75	$42.50	$42.50			
$1,913	$1,275	$2,550	$5,738	x 6	= $ 34,428
d. Dependents under 12					
50%	40%	40%			
$42.50	$34	$34			
$1,275	$1,020	$2,040	$4,335	x 11	= $ 47,685

6. ***Miscellaneous Expense Allowance***

a. Married Employees	$700	x	15	= $10,500
b. Single Employees	$350	x	12	= $ 4,200

PCS TOTAL $969,339

CIVILIAN RIF

Terminal Leave/Lump Sum Payment

$2.39 per hour x 240 hours $2,973.60 x 5 = $14,868

Severance Pay

Number of Weeks = 10 + (2 x 5) = 20

$497 per week x 20 weeks $9,940.00 x 5 = $49,700

TOTAL $64,568

TOTAL COSTS

Civilian PCS	**$969,339**
Civilian RIF	**$64,568**

FY00 AVERAGE SALARIES

METHODOLOGY

1. All military salaries were computed by multiplying the number of authorizations in each pay grade times the corresponding FY00 composite rate. For each personnel class (OFF, WO, ENL, or MAGG), the sum of these products was divided by the total authorizations in that class to determine the average salary.

2. For each activity and site, total civilian base pay dollars were calculated using local pay tables and civilian authorizations by employee type according to the 0400 TDA. Total base pay dollars were then adjusted for funded benefits and premium pay using installation-specific factors based on FY99 obligation data (see page XX). Subsequent division by total authorizations yielded average civilian salaries for each site and activity.

3. Because the Army War College is not reflected in TRADOC TDA documents, the civilian salary shown in this table was computed based on FY99 obligations (inflated to FY00 dollars) in object classes 11, 12, 14, 15, 16, & 17 divided by FY99 base manyears reflected in STANFINS under EOR 11B-/14B-/16B-.

4. MAGG indicates "Military Aggregate", or a weighted average for all military personnel.

DATA SOURCES

- 0400 TRADOC Table of Distribution and Allowances (TDA)
- FY00 Army Composite Standard Rates
- ACPERS Profile of TRADOC Civilian Personnel by Type, Grade, & Step (as of 31 March 00)
- Local Wage Board Employee Hourly Rates (effective April 2000; see www.cpms.osd.mil)
- FY00 General Schedule Locality Pay Tables (see www.opm.gov/oca/2000tbls/GSannual)

FYOO AVERAGE SALARIES

INSTALLATION	UIC	ACTIVITY	OFF	WO	ENL	MAGG	CIV
OFFICER CANDIDATE SCHOOL (PE 311722)							
Benning			83,455		49,229	65,335	34,497
RECRUIT TRAINING (PE 312711)							
Benning			77,327		48,474	51,584	
Jackson			77,183	69,844	46,592	50,315	38,064
Knox			74,359	87,513	47,531	50,978	42,070
Leonard Wood			77,329		47,238	50,857	36,095
Sill			76,206	87,513	48,087	51,153	
Weighted Average			**76,716**	**81,623**	**47,308**	**50,791**	**37,912**
RECEPTION BATTALION (PE 312714)							
Benning			88,149		50,737	54,894	34,657
Jackson			84,568		41,976	45,805	34,596
Knox			94,514		40,472	44,525	40,903
Leonard Wood			88,149		48,212	53,467	36,532
Sill			85,157		46,055	50,710	34,565
Weighted Average			**87,206**		**44,834**	**49,171**	**35,609**
ONE STATION UNIT TRAINING (PE 313761)							
Benning			78,370	69,844	47,137	50,154	38,325
Knox			76,628	84,568	42,780	45,115	42,740
Leonard Wood			76,641		45,986	48,632	41,621
Leonard Wood		Military Police	81,160		48,248	51,730	42,948
Leonard Wood		Chemical	76,396		50,339	52,813	47,698
Sill			75,918	74,261	42,573	44,915	46,359
Weighted Average			**77,501**	**79,482**	**45,108**	**47,806**	**42,404**
NON-COMMISSIONED OFFICER TRAINING (PE 321731/33/34)							
Aberdeen PG					49,650	49,650	50,955
Benning			78,601		46,718	47,230	30,587
Bliss					47,371	47,371	38,112
Eustis		Avn Log			50,326	50,326	
Eustis		Transportation			48,618	48,618	58,715
Gordon					50,131	50,131	56,270
Huachuca					48,099	48,099	
Jackson		ATC	78,601		46,175	46,895	
Jackson		Chaplain			76,121	76,121	
Jackson		School of Music			51,172	51,172	
Jackson		Soldier Spt Institute			45,486	45,486	
Knox					48,894	48,894	38,758
Lee					51,297	51,297	44,789
Leonard Wood			78,601		50,439	50,668	42,325
Redstone					51,545	51,545	53,237
Rucker					53,061	53,061	47,761
Sill					49,499	49,499	
Weighted Average			**78,601**		**48,729**	**48,862**	**48,816**
GENERAL SKILLS TRAINING less NCO (PE 321731/33/34)							
Aberdeen PG			83,509	88,198	46,340	50,879	57,809
Benning		Infantry	82,533	73,378	42,179	45,897	43,185
Benning		School of the Americas	91,947		45,387	60,907	56,563
Bliss			86,714	83,110	44,861	49,058	57,758
Eustis		Transportation	87,767	77,287	43,477	51,721	50,205
Eustis		Aviation Logistics	99,455	86,337	50,018	52,431	51,698
Gordon			82,445	89,588	47,060	50,027	54,564

FY00 AVERAGE SALARIES

STALLATIC UIC	ACTIVITY	OFF	WO	ENL	MAGG	CIV
GENERAL SKILLS TRAINING less NCO (PE 321731/33/34) continued						
Huachuca		80,995	86,272	43,583	48,973	60,147
Jackson	ATC	76,194	86,055	45,740	47,921	51,781
Jackson	Chaplain	99,557		48,271	71,167	61,066
Jackson	School of Music	82,007	97,890	49,065	52,289	45,752
Jackson	Soldier Spt Institute	87,877	69,844	49,479	57,352	53,175
Knox		80,774	85,550	39,698	42,612	49,562
Leavenworth		105,438		43,635	104,017	33,237
Lee	Quartermaster	84,369	86,220	49,441	53,952	51,331
Lee	ALMC	89,426		39,572	81,554	67,216
Leonard Wood	Engineer	92,519		49,787	67,469	53,341
Leonard Wood	Military Police	89,333	81,235	45,078	56,455	55,852
Leonard Wood	Chemical	86,511		44,646	50,425	51,207
Leonard Wood	ATC	81,988	76,912	43,453	47,208	46,551
Pres of Monterey		84,908		44,447	51,612	54,296
Redstone Arsenal		84,742	88,205	48,801	53,065	60,387
Rucker	WOCC	135,174	81,997	55,227	80,312	45,074
Rucker	Aviation	80,673	85,550	46,102	56,672	51,101
Sill		84,143	80,391	40,258	46,294	50,477
Weighted Average		**86,046**	**84,120**	**44,042**	**49,489**	**54,161**
GENERAL SKILLS TRAINING + NCO (PE 321731/33/34)						
Aberdeen PG		83,509	88,198	46,614	50,788	57,514
Benning	School of the Americas	91,947		45,387	60,907	56,563
Benning	Infantry	82,459	73,378	42,657	46,028	42,835
Bliss		86,714	83,110	45,015	48,965	57,594
Eustis	Avn Log	99,455	86,337	50,058	52,172	51,698
Eustis	Transportation	87,767	77,287	44,293	51,312	50,754
Gordon		82,445	89,588	47,300	50,034	54,625
Huachuca		80,995	86,272	43,800	48,937	60,147
Jackson	ATC	77,673	86,055	45,719	47,888	51,781
Jackson	Soldier Spt Institute	87,936	69,844	48,676	55,094	53,175
Jackson	School of Music	82,007	97,890	49,218	52,215	45,752
Jackson	Chaplain	99,557		49,142	71,254	61,066
Knox		80,774	85,550	40,494	43,121	49,331
Leavenworth		105,438		43,635	104,017	33,237
Lee	ALMC	89,426		39,572	81,554	67,216
Lee	Quartermaster	84,369	86,220	49,594	53,759	51,157
Leonard Wood	Engineer	91,448		50,369	53,953	52,748
Leonard Wood	ATC	81,988	76,912	43,488	47,221	46,551
Leonard Wood	Chemical	86,511		44,646	50,425	51,369
Leonard Wood	Military Police	89,333	81,235	45,078	56,455	55,208
Pres of Monterey		84,908		44,447	51,612	54,296
Redstone Arsenal		84,742	88,205	48,944	52,994	60,269
Rucker	Aviation	80,673	85,550	46,895	56,371	50,893
Rucker	WOCC	135,174	81,997	55,227	80,312	45,074
Sill		84,143	80,391	40,988	46,517	50,477
Weighted Average		**86,019**	**84,120**	**44,471**	**49,441**	**54,082**
UNDERGRADUATE PILOT TRAINING (PE 322741)						
Rucker		86,266	82,162	44,821	68,445	65,292
GRADUATE/ADVANCED FLIGHT TRAINING (PE 322743)						
Rucker		83,375	83,601	44,874	71,289	68,363

FY00 AVERAGE SALARIES

STALLATIC	UIC	ACTIVITY	OFF	WO	ENL	MAGG	CIV
PROFESSIONAL MILITARY EDUCATION (PE 323751)							
Bliss		Sgt Major Academy	98,480		61,339	62,796	53,961
Carlisle		Army War College					54,723
Leavenworth		CGSC	106,297		43,164	97,798	55,587
Weighted Average			**105,964**		**59,068**	**80,467**	**55,330**
REAL PROPERTY MAINTENANCE (PE 326776/78 & 325779)							
Benning			135,174			135,174	46,274
Bliss			135,174		76,121	105,648	49,390
Carlisle							48,022
Eustis			135,174		28,145	81,660	49,518
Gordon			135,174		76,121	105,648	48,904
Huachuca					54,940	54,940	49,043
Jackson							46,654
Knox			135,174		47,403	76,660	49,212
Leavenworth			111,380		33,251	72,316	52,954
Lee			111,380		54,940	83,160	50,942
Leonard Wood			135,174		76,121	105,648	48,684
Monroe			111,380			111,380	45,096
Pres of Monterey							59,748
Rucker			135,174		36,351	37,826	45,833
Sill			135,174		49,915	71,230	50,809
Weighted Average			**128,685**		**39,018**	**50,100**	**48,506**
BASE OPERATIONS less REAL PROPERTY MAINTENANCE (PE 325796/19/20 & 324020)							
Benning			96,913	71,693	42,204	51,095	46,036
Bliss			98,066	69,844	40,142	45,210	51,507
Carlisle			101,705		40,758	48,884	48,392
Eustis			93,344	75,734	41,947	51,905	57,493
Gordon			94,301	72,156	42,395	50,831	49,315
HQ Activities			89,021		49,357	61,832	59,210
Huachuca			91,788	69,844	38,908	43,987	50,841
Jackson			90,154	75,227	39,787	46,304	47,866
Knox			93,761	69,844	40,039	45,825	48,348
Leavenworth			98,945	69,844	39,823	48,787	53,575
Lee			97,140	69,844	40,068	49,743	51,761
Leonard Wood			91,474	74,261	39,628	47,962	46,651
Monroe			97,250	87,513	43,015	52,582	57,092
Pres of Monterey			95,737		40,051	74,320	51,801
Rucker			97,399	75,734	39,567	46,187	52,884
Sill			96,040	77,697	39,417	45,690	52,948
Weighted Average			**94,330**	**73,561**	**40,418**	**47,871**	**50,102**
BASE OPERATIONS TOTAL							
Benning			97,802	71,693	42,204	51,400	46,094
Bliss			99,096	69,844	40,232	45,483	50,737
Carlisle			101,705		40,758	48,884	48,231
Eustis			94,506	75,734	41,861	52,199	54,862
Gordon			95,540	72,156	42,586	51,346	49,239
HQ Activities			89,021		49,357	61,832	59,210
Huachuca			91,788	69,844	38,970	44,025	50,424
Jackson			90,154	75,227	39,787	46,304	47,497
Knox			94,624	69,844	40,075	46,026	48,569
Leavenworth			99,311	69,844	39,788	48,998	53,381
Lee			97,571	69,844	40,158	50,077	51,503
Leonard Wood			92,240	74,261	39,747	48,276	46,851

FY00 AVERAGE SALARIES

STALLATIC	UIC	ACTIVITY	OFF	WO	ENL	MAGG	CIV
BASE OPERATIONS TOTAL continued							
Monroe			98,820	87,513	43,015	53,735	53,330
Pres of Monterey			95,737		40,051	74,320	51,974
Rucker			98,702	75,734	38,850	44,479	49,717
Sill			96,994	77,697	39,503	45,933	51,822
Weighted Average			**94,909**	**73,561**	**40,383**	**47,957**	**48,931**
INSTALLATION TOTALS (all PEs)							
Benning			85,170	73,594	44,477	49,662	47,140
Bliss			87,969	81,134	44,224	49,904	53,615
Carlisle			101,705		40,112	47,052	47,864
Eustis			93,048	83,011	45,833	52,739	55,997
Gordon			88,016	86,070	46,322	51,975	54,815
HQ Activities			100,033	89,757	55,191	78,058	69,546
Huachuca			86,389	85,549	43,382	49,500	56,359
Jackson			84,518	79,409	45,694	50,935	50,049
Knox			83,029	82,694	41,769	45,595	50,346
Leavenworth			97,993	80,182	39,592	66,871	61,659
Lee			89,698	87,231	47,233	59,091	58,879
Leonard Wood			85,837	81,003	45,584	51,847	50,491
Monroe			96,798	87,513	38,747	44,468	53,105
Pres of Monterey			87,539	87,513	44,112	53,125	53,980
Rucker			87,389	83,283	42,261	59,800	57,247
Sill			85,935	80,370	42,523	47,954	54,259
Weighted Average			**89,892**	**83,079**	**44,128**	**52,613**	**54,485**
TRAINING DEVELOPMENTS (PE 324772)							
Aberdeen PG			82,941	97,890	51,006	56,561	74,558
Benning			88,721		50,442	65,421	66,231
Bliss		Air Defense	92,424	83,786	50,641	64,027	63,987
Bliss		Sgt Major			62,470	62,470	54,059
Eustis		Avn Log	94,514	87,513	50,000	53,238	61,156
Eustis		Transportation	86,558	88,295	52,117	60,729	76,164
Gordon			82,839	90,107	50,066	55,436	62,874
HQ Activities			96,704		51,172	93,766	80,000
Huachuca			85,115	86,530	49,478	54,406	66,423
Jackson		ATC			54,940	54,940	62,949
Jackson		Chaplain	91,424		49,364	64,860	59,542
Jackson		School of Music		69,844	50,543	52,028	56,563
Jackson		Soldier Spt Institute	88,074	85,082	51,525	59,920	65,787
Knox			87,069		51,444	59,315	67,444
Leavenworth		CAC	100,622	97,890	46,422	91,971	60,243
Leavenworth		TRAC					79,220
Lee		Quartermaster	84,568	88,165	52,108	64,974	68,994
Lee		CASCOM	85,504	91,219	54,321	68,820	71,306
Leonard Wood		Engineer	87,294	84,568	49,834	56,413	63,167
Leonard Wood		Military Police	81,977		54,914	73,222	74,540
Leonard Wood		Chemical	92,763		52,992	72,878	
Pres of Monterey			111,380	87,513	33,251	55,316	
Redstone Ars			78,601	87,513	45,632	51,466	
Rucker		WOCC					66,960
Rucker		Aviation	85,642	87,141	50,226	66,105	67,293
Sill			96,201	85,032	49,669	56,061	64,485
Weighted Average			**91,398**	**87,395**	**50,093**	**62,183**	**66,109**

APPENDIX A

COMPOSITE CER/MER

AND

CER/MER INDEXED BY INSTALLATION

COMPOSITE CER and MER for FY 01

Composite CER contains OMA personnel (pay) + non-personnel (non-pay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Non personnel CER contain NO civ pay dollars.
Military MER based on FY 02 structure load and 0202 TDA.

FY 01 Dollars
[FY 00 Experience]

Activity	AMS Code	Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Basic Training, Combined CER	312711 CER	$1,814,904	$302 X		11,583					
Personnel CER	312711 CER	$626,035	$72 X							
Nonpersonnel CER	312711 CER	$1,188,870	$231 X							
Advanced Individual Training Combined CER	321731.1 CER	$3,554,208	$1,222 X		2,329					
Personnel CER	321731.1 CER	$1,452,178	$600 X							
Nonpersonnel CER	321731.1 CER	$2,102,030	$622 X							
Military MER	321731.1 MER	550	0.151 X		2,939	4.5%	0.8%	94.7%	0.89	0.69
General Skills Training Combined CER	321731.2/4 CER	$80,130,475	$3,959 X		24,902					
Personnel CER	321731.2/4 CER	$58,282,704	$2,822 X							
Nonpersonnel CER	321731.2/4 CER	$21,847,771	$1,137 X							
Military MER	321731.2/4 MER	5,255	0.180 X		30,797	10.7%	1.7%	87.6%	0.85	0.69
Professional Military Education Combined CER	323751 CER	$5,288,274	$3,190 X		1,442					
Personnel CER	323751 CER	$2,612,845	$1,506 X							
Nonpersonnel CER	323751 CER	$2,675,429	$1,685 X							
Military MER	323751 MER	227	0.089 X		2,029	49.2%	0.2%	50.5%	0.86	0.69
One Station Unit Training Combined CER	313761 CER	$3,942,916	$1,270 X		8,832					
Personnel CER	313761 CER	$1,869,998	$463 X							
Nonpersonnel CER	313761 CER	$2,072,918	$806 X							
BASOPS Total Combined CER	323796.Z+ CER	$491,640,085	$2,113 X		142,786					
Personnel CER	323796.Z+ CER	$275,496,249	$1,118 X							
Nonpersonnel CER	323796.Z+ CER	$216,143,836	$998 X							
Military MER	323796.Z+ MER	2,816	0.013 X		143,913	11.4%	1.2%	87.4%	0.83	0.45
Reception Battalion Combined CER	312714 CER	$1,370,007	$34 X1	$41 X2	114,201					
Personnel CER	312714 CER	$1,082,498	$26 X1							
Nonpersonnel CER	312714 CER	$287,509	$8 X1	$41 X2						
Military MER	312714 MER	67	0.0016 X		126,367	10.4%	0.0%	89.6%	0.64	0.75

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 02 IMRL structure load and 0202 TDA.

FY 01 Dollars
[FY 00 Experience]

Installation	School or Activity	AMS Code	Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Aberdeen Proving Ground											
	Ordnance + TSED Schools, Combined CER	321781.2 CER1	$4,464,982	$3,421 X		2,022					
	Personnel CER	321781.2 CER2	$3,407,909	$2,610 X							
	Nonpersonnel CER	321781.2 CER3	$1,057,073	$811 X							
	Military MER	321781.2 MER	248	0.155 X		2549	9.2%	2.8%	88.0%	0.89	0.47
	School of Military Packaging, Comb. CER	321781.2 CER1	$590,248	$7,322 X		112					
	Personnel CER	321781.2 CER2	$429,686	$6,179 X							
	Nonpersonnel CER	321781.2 CER3	$160,562	$1,143 X							
	Military MER	321781.2 MER	*Not Applicable*								
Fort Benning											
	Basic Training, Combined CER	312711 CER1	$0	$0 X		2,334					
	Personnel CER	312711 CER2		X							
	Nonpersonnel CER	312711 CER3		X							
	Officer Candidate School, Combined CER	311702 CER1	$158,789	$457 X		206					
	Personnel CER	311702 CER2	$68,251	$144 X							
	Nonpersonnel CER	311702 CER3	$90,538	$313 X							
	Military MER	311702 MER	24	0.073 X		165	44.4%	0.0%	55.6%	1.00	0.67
	Reception Battalion Combined CER	312714 CER1	$477,078	$37 X1	$41 X2	27,047					
	Personnel CER	312714 CER2	$366,915	$27 X1							
	Nonpersonnel CER	312714 CER3	$110,163	$11 X1	$41 X2						
	Military MER	312714 MER	11	0.0013 X		29,918	13.7%	0.0%	86.3%	0.74	1.00
	One Station Unit Training, Combined CER	312761 CER1	$1,185,521	$324 X		3,563					
	Personnel CER	312761 CER2	$458,545	$123 X							
	Nonpersonnel CER	312761 CER3	$726,976	$201 X							
	Infantry School, Combined CER	321781.2 CER1	$5,390,172	$1,930 X		2,417					
	Personnel CER	321781.2 CER2	$2,309,933	$656 X							
	Nonpersonnel CER	321781.2 CER3	$3,080,239	$1,274 X							
	Military MER	321781.2+ MER	1,124	0.303 X		2,736	8.1%	0.3%	91.6%	0.85	0.47
	Bnscpe Total Combined CER	326796.2+ CER1	$52,232,551	$1,972 X		20,752					
	Personnel CER	326796.2+ CER2	$33,309,781	$1,276 X							
	Nonpersonnel CER	326796.2+ CER3	$18,922,770	$696 X							
	Military MER	326796.2+ MER	229	0.009 X		21,490	12.6%	1.4%	86.0%	0.92	0.49

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 02 IMRL structure load and 0302 TDA.

Installation	School or Activity	AMS Code	FY 01 Dollars [FY 00 Experience] Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Fort Bliss											
	Air Defense School, Combined CER	321731.2 CER1	$5,386,867	$3,497 X		885					
	Personnel CER	321731.2 CER2	$3,644,333	$2,201 X							
	Nonpersonnel CER	321731.2 CER3	$1,742,534	$1,296 X							
	Military MER	321731.2 MER	489	0.255 X		1,275	7.0%	2.8%	90.2%	0.82	0.65
	Sergeants Major Academy, Combined CER	323761 CER1	$819,462	$1,086 X		609					
	Personnel CER	323761 CER2	$472,050	$370 X							
	Nonpersonnel CER	323761 CER3	$347,412	$716 X							
	Military MER	323761 MER	102	0.063 X		1097	3.5%	0.0%	96.5%	0.96	0.43
	Bnsops Total Combined CER	325796 Z+ CER1	$40,771,358	$2,099 X		11,392					
	Personnel CER	325796 Z+ CER2	$22,548,029	$1,013 X							
	Nonpersonnel CER	325796 Z+ CER3	$18,223,329	$1,086 X							
	Military MER	325796 Z+ MER	289	0.013 X		11,711	8.5%	1.6%	89.9%	0.88	0.45
Carlisle Barracks											
	Bnsops Total Combined CER	325796 Z+ CER1	$8,359,485	$1,795 X		1,080					
	Personnel CER	325796 Z+ CER2	$6,584,197	$1,502 X							
	Nonpersonnel CER	325796 Z+ CER3	$1,775,288	$293 X							
	Military MER	325796 Z+ MER	52	0.01 X		1,100	12.7%	0.0%	87.3%	0.85	0.51
Fort Eustis											
	Aviation Logistics School, Combined CER	321731.2 CER1	$2,466,344	$5,688 X		1,415					
	Personnel CER	321731.2 CER2	$1,267,174	$2,697 X							
	Nonpersonnel CER	321731.2 CER3	$1,199,170	$2,991 X							
	Military MER	321731.2 MER	94	0.218 X		1,399	2.3%	2.8%	94.9%	0.86	0.55
	Transportation School, Combined CER	321731.2 CER1	$4,407,009	$7,459 X		580					
	Personnel CER	321731.2 CER2	$3,149,777	$3,892 X							
	Nonpersonnel CER	321731.2 CER3	$1,257,232	$3,567 X							
	Military MER	321731.2 MER	184	0.227 X		687	13.2%	3.2%	83.5%	0.80	0.63
	Bnsops Total Combined CER	325796 Z+ CER1	$24,293,308	$2,176 X		10,775					
	Personnel CER	325796 Z+ CER2	$11,893,264	$1,196 X							
	Nonpersonnel CER	325796 Z+ CER3	$12,400,044	$980 X							
	Military MER	325796 Z+ MER	133	0.015 X		10,695	13.7%	2.1%	84.2%	0.76	0.40

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 03 IMRL structure load and 0302 TDA.

Installation	School or Activity	AMS Code	FY 01 Dollars [FY 00 Experience] Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Fort Gordon											
	Signal School, Combined CER	321731 2 CER1	$4,535,831	$3,343 X		3,206					
	Personnel CER	321731 2 CER2	$3,793,230	$2,793 X							
	Nonpersonnel CER	321731 2 CER3	$742,601	$550 X							
	Military MER	321731 2 MER	225	0.136 X		4,969	6.5%	1.1%	92.4%	0.82	0.71
	Basops Total Combined CER	326796 2+ CER1	$32,366,644	$2,492 X		9,604					
	Personnel CER	326796 2+ CER2	$9,583,623	$1,201 X							
	Nonpersonnel CER	326796 2+ CER3	$22,783,021	$1,291 X							
	Military MER	326796 2+ MER	147	0.016 X		10,258	12.1%	1.3%	86.6%	0.73	0.50
Fort Huachuca											
	General Intelligence Trng, Combined CER	321733 34	$7,483,697	$2,112 X		1,897					
	Personnel CER	321733 34	$2,962,267	$884 X							
	Nonpersonnel CER	321733 34	$4,521,430	$1,228 X							
	Military MER	321733 34	558	0.14 X		2,158	10.1%	3.7%	86.2%	0.81	0.39
	Basops Total Combined CER	326796 2+ CER1	$26,161,432	$2,164 X		7,445					
	Personnel CER	326796 2+ CER2	$16,265,797	$729 X							
	Nonpersonnel CER	326796 2+ CER3	$9,895,635	$1,435 X							
	Military MER	326796 2+ MER	304	0.011 X		7,715	7.7%	0.8%	91.5%	0.90	0.44
Fort Jackson											
	Basic Training, Combined CER	312711 CER1	$401,057	$353 X		6,015					
	Personnel CER	312711 CER2	$53,972	$47 X							
	Nonpersonnel CER	312711 CER3	$347,085	$305 X							
	Reception Battalion Combined CER	312714 CER1	$178,979	$30 X1	$41 X2	35,711					
	Personnel CER	312714 CER2	$146,067	$25 X1							
	Nonpersonnel CER	312714 CER3	$32,912	$5 X1	$41 X2						
	Military MER	312714 MER	12	0.0019 X		40,400	9.0%	0.0%	91.0%	0.72	0.83
	Advanced Individual Trng, Combined CER	321731 1 CER1	$566,344	$642 X		833					
	Personnel CER	321731 1 CER2	$155,836	$121 X							
	Nonpersonnel CER	321731 1 CER3	$410,508	$521 X							
	Military MER	321731 1 MER	154	0.107 X		992	4.6%	1.9%	93.5%	0.94	0.69

Fort Jackson continued next page

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 02 IMRL structure load and 0202 TDA.

FY 01 Dollars
[FY 00 Experience]

Installation	School or Activity	AMS Code	Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Fort Jackson	*continued*										
	Soldier Support Institute, Combined CER	821731.2 CER1	$2,511,633	$817 X		2,020					
	Personnel CER	821731.2 CER2	$1,801,033	$542 X							
	Nonpersonnel CER	821731.2 CER3	$710,600	$275 X							
	Military MER	821731.2 MER	220	0.073 X		2235	16.1%	0.8%	83.1%	0.85	0.67
	Chaplain School, Combined CER	821731.2 CER1	$1,147,149	$2,395 X		101					
	Personnel CER	821731.2 CER2	$943,626	$906 X							
	Nonpersonnel CER	821731.2 CER3	$203,523	$1,489 X							
	Military MER	821731.2 MER	50	0.051 X		146	43.9%	0.0%	56.1%	0.93	0.76
	Basops Total Combined CER	826796.2+ CER1	$39,264,553	$1,564 X		12,892					
	Personnel CER	826796.2+ CER2	$20,245,349	$828 X							
	Nonpersonnel CER	826796.2+ CER3	$19,019,204	$736 X							
	Military MER	826796.2+ MER	293	0.011 X		13,769	12.8%	1.1%	86.1%	0.74	0.37
Fort Knox											
	Basic Training, Combined CER	812711 CER1	$497,013	$319 X		1,558					
	Personnel CER	812711 CER2	$227,638	$165 X							
	Nonpersonnel CER	812711 CER3	$269,376	$155 X							
	Reception Battalion Combined CER	812714 CER1	$200,810	$37 X1	$41 X2	13,505					
	Personnel CER	812714 CER2	$181,190	$24 X1							
	Nonpersonnel CER	812714 CER3	$19,620	$13 X1	$41 X2						
	Military MER	812714 MER	14	0.0016 X		15,476	7.7%	0.0%	92.3%	0.57	0.42
	One Station Unit Training, Combined CER	813761 CER1	$1,169,389	$4,704 X		1,331					
	Personnel CER	813761 CER2	$757,696	$1,374 X							
	Nonpersonnel CER	813761 CER3	$411,693	$3,330 X							
	Armor School, Combined CER	821731.2 CER1	$5,893,843	$7,337 X		944					
	Personnel CER	821731.2 CER2	$3,354,147	$3,187 X							
	Nonpersonnel CER	821731.2 CER3	$2,539,696	$4,150 X							
	Military MER	821731.2 MER	1,114	0.781 X		1,346	6.1%	0.4%	93.5%	0.87	0.46
	Basops Total Combined CER	826796.2+ CER1	$56,167,911	$2,210 X		13,210					
	Personnel CER	826796.2+ CER2	$35,480,948	$1,166 X							
	Nonpersonnel CER	826796.2+ CER3	$20,686,963	$1,044 X							
	Military MER	826796.2+ MER	339	0.01 X		11,409	10.8%	0.9%	88.3%	0.88	0.47

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 02 IMRL structure load and 0202 TDA.

FY 01 Dollars
[FY 00 Experience]

Breakout of Military Manpower

Installation	School or Activity	AMS Code	Fixed (A)	Variable (B1)	Variable (B2)	Load	Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Fort Leavenworth											
	CAS Cube, Combined CER	321T31 2 CER1	$32,456	$354 X		475					
	Personnel CER	321T31 2 CER2	$9,415	$161 X							
	Nonpersonnel CER	321T31 2 CER3	$23,041	$193 X							
	Military MER	321T31 2 MER	10	0.149 X		504	100.0%	0.0%	0.0%	0.98	1.00
	Command & General Staff Coll., Comb. CER	323T61 CER1	$4,468,812	$4,729 X		833					
	Personnel CER	323T61 CER2	$2,140,795	$2,336 X							
	Nonpersonnel CER	323T61 CER3	$2,328,017	$2,393 X							
	Military MER	323T61 MER	125	0.12 X		932	82.3%	0.4%	17.3%	0.80	0.76
	Basops Total Combined CER	326T96 2+ CER1	$19,692,350	$2,060 X		4,447					
	Personnel CER	326T96 2+ CER2	$14,227,577	$1,195 X							
	Nonpersonnel CER	326T96 2+ CER3	$5,464,773	$865 X							
	Military MER	326T96 2+ MER	160	0.011 X		5,157	16.2%	0.5%	83.3%	0.87	0.50
Fort Lee											
	ALMC, Combined CER*	321T31 2 CER1	$7,373,753	$4,025 X		458					
	*Personnel CER**	321T31 2 CER2	$5,866,275	$3,202 X							
	*Nonpersonnel CER**	321T31 2 CER3	$1,507,478	$823 X							
	Military MER*	321T31 2 MER	37	0.071 X		548	84.2%	0.0%	15.8%	0.97	0.95
	*Does not include DAU load or dollars										
	Quartermaster School, Combined CER	321T31 2 CER1	$1,909,914	$1,824 X		3,204					
	Personnel CER	321T31 2 CER2	$1,349,383	$1,093 X							
	Nonpersonnel CER	321T31 2 CER3	$560,531	$732 X							
	Military MER	321T31 2 MER	180	0.132 X		3850	10.6%	1.4%	88.0%	0.82	0.67
	Basops Total Combined CER	326T96 2+ CER1	$31,203,931	$1,666 X		8,123					
	Personnel CER	326T96 2+ CER2	$18,001,504	$976 X							
	Nonpersonnel CER	326T96 2+ CER3	$13,202,427	$690 X							
	Military MER	326T96 2+ MER	187	0.009 X		8,433	13.1%	1.1%	85.8%	0.87	0.58
Fort Monroe											
	Basops Total Combined CER	326T96 2+ CER1	$17,929,854	$1,655 X		2,223					
	Personnel CER	326T96 2+ CER2	$9,664,974	$1,560 X							
	Nonpersonnel CER	326T96 2+ CER3	$8,264,880	$95 X							
	Military MER	326T96 2+ MER	131	0.019 X		2,264	12.6%	1.1%	86.2%	0.95	0.59

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 02 IMRL structure load and 0202 TDA.

FY 01 Dollars
(FY 00 Experience)

Installation	School or Activity	AMS Code	Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Presidio of Monterey											
	Defense Language Institute, Combined CER	321781.4 CER1	$18,291,893	$10,543 X		2,928					
	Personnel CER	321781.4 CER2	$16,300,342	$9,681 X							
	Nonpersonnel CER	321781.4 CER3	$1,991,551	$862 X							
	Military MER	321781.4 MER	71	0.037 X		3,163	18.2%	0.0%	81.8%	0.71	0.77
	Basops Total Combined CER	325796.2+ CER1	$22,787,799	$3,123 X		4,347					
	Personnel CER	325796.2+ CER2	$12,086,058	$1,547 X							
	Nonpersonnel CER	325796.2+ CER3	$10,701,741	$1,576 X							
	Military MER	325796.2+ MER	10	0.002 X		4,205	56.3%	0.0%	43.7%	0.94	0.38
Redstone Arsenal											
	Missile & Munitions School, Combined CER	321781.2 CER1	$3,936,326	$8,095 X		558					
	Personnel CER	321781.2 CER2	$2,316,252	$6,577 X							
	Nonpersonnel CER	321781.2 CER3	$1,620,074	$1,518 X							
	Military MER	321781.2 MER	265	0.225 X		1,616	8.3%	2.4%	89.3%	0.83	0.63
Fort Rucker											
	Aviation Noutflight School, Combined CER	321781.2 CER1	$2,829,899	$3,076 X		542					
	Personnel CER	321781.2 CER2	$2,275,367	$2,281 X							
	Nonpersonnel CER	321781.2 CER3	$554,532	$795 X							
	Military MER	321781.2 MER	147	0.118 X		584	18.5%	8.3%	73.2%	0.71	0.61
	Warrant Officer Career Center, Combined CER	321781.2 CER1	$545,207	$1,659 X		188					
	Personnel CER	321781.2 CER2	$373,902	$1,003 X							
	Nonpersonnel CER	321781.2 CER3	$171,305	$656 X							
	Military MER	321781.2 MER	23	0.035 X		259	3.1%	84.4%	12.5%	0.57	0.00
	Basops Total Combined CER	325796.2+ CER1	$39,021,454	$3,461 X		6,029					
	Personnel CER	325796.2+ CER2	$27,303,956	$2,093 X							
	Nonpersonnel CER	325796.2+ CER3	$11,717,498	$1,367 X							
	Military MER	325796.2+ MER	218	0.018 X		6,192	9.7%	0.9%	89.4%	0.99	0.46
	Undergraduate Pilot Training Academic CER	322741 CER1	$19,044,531	$25,704 X		672					
	Personnel CER	322741 CER2	$5,391,502	$6,821 X							
	Nonpersonnel CER	322741 CER3	$13,653,029	$18,883 X							
	UPT Flying Hour CER	322741 CER4	$7,077,966	$368 X		159,824					
	Undergraduate Pilot Trg. Composite CER	322741 CER4	$26,122,497	$113,280 X							
	Military MER	322741 MER	248	0.255 X		861	18.4%	42.9%	38.7%	0.85	0.54
	Graduate Pilot Training Academic CER	322743 CER1	$4,781,843	$18,741 X		385					
	Personnel CER (Academic, only)	322743 CER2	$2,984,779	$11,253 X							
	Nonpersonnel CER (Academic, only)	322743 CER3	$1,797,064	$7,488 X							
	Military MER	322743	179	0.569 X		534	8.3%	60.0%	31.7%	0.88	0.77

Note: The Rucker costs are computed using the FY 00 programmed student and flying hour loads as of April, 2000.

Fort Rucker CER continued on next page

Fort Rucker, continued	Graduate Pilot Training CER, by course	822748	CER based on FY 00 flying hour program and loads as of April, 2000.			flying hour	Non flying hour
Aircraft	Informal Course Name	COURSE NUMBER	FIXED (A)	VARIABLE (B)	VARIABLE (B)	VARIABLE (B)	VARIABLE (B)
Rotary Wing							
AH-64	AH-64 Aviator Qual.Crs.	2C-SID5/152F	$28,298,153	$662,052 X	$164,189 X	$160,739 X	$3,450 X
AH-64	AH-64 Instr.Pilot Crs.	2C-SIG2/2C-SQIC(AH-64)	$4,169,177	$1,004,461 X	$144,642 X	$142,639 X	$2,003 X
AH-64	AH-64 Instr.Pilot MOI	2C-SIG2/SQIC (AH-64 MOI)	$1,609,833	$747,956 X	$140,616 X	$138,000 X	$2,615 X
AH-64	AH-64 MM/Maint Test Pilot	4D-SIG6/SQIG(AH-64)	$1,384,381	$442,087 X	$49,514 X	$47,956 X	$1,558 X
AH-64D	AH-64D IP MOI (Supplemental)	2C-SIG2/SQIC(64DMOI/SU)	$272,020	$679,790 X	$43,507 X	$42,616 X	$890 X
AH-64D	AH-64D Aviator Qual. Crs.	2C-SID5/152F(AH-64D)	$507,594	$251,271 X	$72,366 X	$68,359 X	$4,007 X
AH-64D	AH-64D Aviator Qual. Crs. (Supplemental)	2C-SID7/152F	$2,707,657	$595,349 X	$78,586 X	$76,750 X	$1,836 X
AH-64D	AH-64D Instr. Pilot (Supplemental)	2C-SIG2/2C-SQIC(SUP-64D)	$188,939	$624,551 X	$39,971 X	$39,081 X	$890 X
AH-64D	AH-64D Maint Test Pilot (Supplemental)	4D-SIG6/SQIC(SUP-64D)	$209,162	$737,742 X	$29,510 X	$28,953 X	$556 X
CH-47D	CH-47D Aviator Qual.Crs.	2C-SIC2/2C-154C	$3,859,027	$318,347 X	$63,669 X	$60,887 X	$2,782 X
CH-47D	CH-47D Inst. Pilot Crs.	2C-SIG2/2C-SQIC(CH-47D)	$945,315	$457,368 X	$91,474 X	$88,691 X	$2,782 X
CH-47D	CH-47D Instr. Pilot MOI	2C-SIG2/SQIC (CH-47D MOI)	$415,111	$455,817 X	$91,163 X	$88,381 X	$2,782 X
CH-47D	CH-47D MM/Maint Test Pilot	4D-SIG6/SQIG(CH-47D)	$409,217	$402,340 X	$28,968 X	$27,967 X	$1,001 X
OH-58C	OH-58 Instr. Pilot Crs.	2C-SIG2/2C SQIC(OH-58)	$13,923	$135,436 X	$22,753 X	$20,416 X	$2,337 X
OH-58C	OH-58C Aeroscout NVD Inst Pilot MOI	2C-SIG2/SQIC (OH-58NVD)(G)	$2,063	$149,245 X	$10,746 X	$9,744 X	$1,002 X
OH-58C	OH-58C Aeroscout Inst Pilot MOI	2C-SIG2/SQIC (OH-58A/N)(G)	$10,173	$119,502 X	$18,642 X	$16,472 X	$2,170 X
OH-58C	OH-58C MM/Maint Test Pilot	4D-SIG6/SQIG(OH-58C)	$10,935	$84,088 X	$5,713 X	$4,767 X	$946 X
OH-58D	OH-58D W Instr Pilot MOI	2C-SIG2/SQIC(OH-58DW MOI)	$129,637	$300,508 X	$68,516 X	$65,344 X	$3,172 X
OH-58D	OH-58D W Instr Pilot Crs.	2C-SIG2/2C-SQIC(OH-58DW)	$323,098	$320,136 X	$66,588 X	$63,695 X	$2,894 X
OH-58D	OH-58D W Aviator Qual Crs.	2C-SIA3/152D	$2,213,511	$315,285 X	$70,624 X	$67,508 X	$3,116 X
OH-58D	OH-58D W MM/Maint Test Pilot	4D-SIG6/SQIG(OH-58D)	$162,995	$176,008 X	$19,009 X	$17,509 X	$1,502 X
UH-1	UH-1 IP MOI	2C-SIG2/SQIC(UH-1)	$94,924	$159,508 X	$24,883 X	$22,713 X	$2,170 X
UH-1	UH-1 Maint Test Pilot Crs.	4D-SIG6/SQIG(UH-1)	$65,340	$56,287 X	$4,053 X	$3,051 X	$1,002 X
UH-1	UH-1 IPC	2C-SIG2/2C-SQIC(UH-1)	$232,571	$112,621 X	$18,019 X	$15,793 X	$2,226 X
UH-1	UH-1 N1/NVG IP MOI	2C-SIG2/SQIC(UH-1 N/NVG)	$7,093	$102,900 X	$8,232 X	$7,119 X	$1,113 X
UH-1	RW Qual. Crs.	2C-SIB1/2C-153B(CT)	$1,266,471	$103,298 X	$22,726 X	$13,943 X	$8,783 X
UH-60	UH-60 Instr. Pilot MOI	2C-SIG2/SQIC(UH-60)	$56,807	$366,798 X	$66,024 X	$63,519 X	$2,504 X
UH-60	UH-60 Aviator Qual Crs.	2C-SIB2/2C-153D	$994,214	$322,165 X	$38,660 X	$36,990 X	$1,669 X
UH-60	UH-60 Instr. Pilot Crs.	2C-SIG2/2C-SQIC(UH-60)	$295,680	$387,228 X	$61,956 X	$59,731 X	$2,226 X
UH-60	UH-60 MM/Maint Test Pilot	4D-SIG6/SQIG(UH-60)	$121,187	$252,448 X	$20,196 X	$19,083 X	$1,113 X

Note: Average resident student load or input, only. Flying hour and non flying hour variables are subsets of the variable based on input. Flying hour costs are costs for the course, not the costs per flying hour.

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 02 IMEL structure load and 0202 TDA.

FY 01 Dollars
[FY 00 Experience]

Installation	School or Activity	AMS Code	Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Fort Sill											
	Basic Training, Combined CER	812711 CER1	$376,752	$214 X		2,037					
	Personnel CER	812711 CER2	*Not Applicable*								
	Nonpersonnel CER	812711 CER3	$376,752	$214 X							
	Reception Battalion Combined CER	812714 CER1	$259,606	$39 X1	$40 X2	15,568					
	Personnel CER	812714 CER2	$155,421	$28 X1							
	Nonpersonnel CER	812714 CER3	$104,185	$11 X1	$40 X2						
	Military MER	812714 MER	12	0.0018 X		17,592	11.6%	0.0%	88.4%	0.59	0.82
	One Station Unit Training, Combined CER	813761 CER1	$989,729	$1,047 X		661					
	Personnel CER	813761 CER2	$399,594	$400 X							
	Nonpersonnel CER	813761 CER3	$590,135	$647 X							
	Field Artillery School, Combined CER	821731 2 CER1	$3,682,888	$2,289 X		1,445					
	Personnel CER	821731 2 CER2	$2,446,912	$1,172 X							
	Nonpersonnel CER	821731 2 CER3	$1,235,976	$1,117 X							
	Military MER	821731 2 MER	512	0.23 X		1,648	11.4%	2.0%	86.6%	0.90	0.72
	Basops Total Combined CER	825798 2+ CER1	$35,330,287	$1,872 X		16,044					
	Personnel CER	825798 2+ CER2	$15,825,406	$685 X							
	Nonpersonnel CER	825798 2+ CER3	$19,504,881	$1,187 X							
	Military MER	825798 2+ MER	136	0.025 X		15,702	8.4%	1.5%	90.1%	0.72	0.39
Fort Leonard Wood											
	Basic Training, Combined CER	812711 CER1	$540,082	$228 X		1,973					
	Personnel CER	812711 CER2	$344,425	$146 X							
	Nonpersonnel CER	812711 CER3	$195,657	$82 X							
	Reception Battalion Combined CER	812714 CER1	$253,534	$32 X1	$44 X2	22,370					
	Personnel CER	812714 CER2	$232,905	$29 X1							
	Nonpersonnel CER	812714 CER3	$20,629	$3 X1	$44 X2						
	Military MER	812714 MER	18	0.0012 X		23,181	10.9%	0.0%	89.1%	0.55	0.57

Fort Leonard Wood CER continued on the next page.

CER and MER for FY 01

Combined CER contains OMA personnel (pay) + nonpersonnel (nonpay) dollars with FY 00 actual load.
Personnel CER contain only civilian pay dollars.
Nonpersonnel CER contain NO civ pay dollars.
Military MER based on FY 02 IMEL structure load and 0202 TDA.

Installation	School or Activity	AMS Code		FY 01 Dollars [FY 00 Experience] Fixed (A)	Variable (B1)	Variable (B2)	Load	Breakout of Military Manpower: Officer %	Warrant %	Enlisted %	Military Auth/Req	Civilian Auth/Req
Fort Leonard Wood	*continued*											
	One Station Unit Training, Combined CER	813761	CER1	$205,964	$1,679	X	1,142					
	Personnel CER	813761	CER2	$123,776	$1,009	X						
	Nonpersonnel CER	813761	CER3	$82,188	$671	X						
	Advanced Individual Trng., Combined CER	821781 1	CER1	$2,987,864	$1,545	X	1,496					
	Personnel CER	821781 1	CER2	$1,296,342	$867	X						
	Nonpersonnel CER	821781 1	CER3	$1,691,522	$678	X						
	Military MER	821781 1	MER	396	0.173	X	1,947	4.5%	0.4%	95.1%	0.87	0.51
	Engineer School, Combined CER	821781 2	CER1	$1,644,142	$1,712	X	632					
	Personnel CER	821781 2	CER2	$1,168,791	$1,075	X						
	Nonpersonnel CER	821781 2	CER3	$475,351	$637	X						
	Military MER	821781 2	MER	86	0.073	X	546	25.4%	1.6%	73.0%	0.97	0.51
	Basops Total Combined CER	826796 2+	CER1	$46,057,168	$2,190	X	14,423					
	Personnel CER	826796 2+	CER2	$22,475,786	$1,176	X						
	Nonpersonnel CER	826796 2+	CER3	$23,581,382	$1,015	X						
	Military MER	826796 2+	MER	188	0.01	X	13,813	13.1%	1.2%	85.6%	0.77	0.42
	Chemical School, Combined CER	821781 2	CER1	$1,717,255	$2,659	X	314					
	Personnel CER	821781 2	CER2	$1,208,187	$1,255	X						
	Nonpersonnel CER	821781 2	CER3	$509,068	$1,403	X						
	Military MER	821781 2	MER	66	0.055	X	304	39.8%	0.0%	60.2%	0.72	0.54
	Military Police School, Combined CER	821781 2	CER1	$1,372,664	$1,608	X	456					
	Personnel CER	821781 2	CER2	$867,030	$675	X						
	Nonpersonnel CER	821781 2	CER3	$505,634	$933	X						
	Military MER	821781 2	MER	110	0.067	X	433	21.6%	5.8%	72.7%	0.89	0.79
	Chem. One Station Unit Trng., Comb. CER	813761	CER1	$170,518	$718	X	602					
	Personnel CER	813761	CER2	$40,428	$171	X						
	Nonpersonnel CER	813761	CER3	$130,090	$547	X						
	MP One Station Unit Trng., Comb. CER	813761	CER1	$221,795	$493	X	1,533					
	Personnel CER	813761	CER2	$89,959	$200	X						
	Nonpersonnel CER	813761	CER3	$131,836	$293	X						

APPENDIX B

Click here for TRADOC inflation guidance and other inflation tables.

INFLATION INDICES - FY 83 to FY 99/00

FY	EOR 110, 120, 130 Civilian Salaries 1/ GS	WB	Civilian Pay 1/ U.S. Composite	140 Military Pay 1/ Composite	260, 310 Supplies & Equipment 2/	(Less 140) Services & Other 3/
1983	1.910	1.867	1.896	1.900	1.300	1.845
1984	1.840	1.798	1.826	1.812	1.270	1.780
1985	1.761	1.740	1.755	1.610	1.254	1.703
1986	1.721	1.697	1.714	1.553	1.282	1.632
1987	1.631	1.661	1.640	1.513	1.273	1.575
1988	1.553	1.545	1.551	1.455	1.236	1.515
1989	1.457	1.454	1.456	1.410	1.179	1.439
1990	1.392	1.389	1.391	1.394	1.143	1.368
1991	1.339	1.336	1.338	1.334	1.096	1.295
1992	1.285	1.282	1.284	1.295	1.089	1.240
1993	1.238	1.235	1.237	1.238	1.067	1.188
1994	1.207	1.206	1.206	1.207	1.056	1.147
1995	1.177	1.177	1.177	1.177	1.020	1.107
1996	1.150	1.150	1.150	1.150	1.001	1.073
1997	1.116	1.116	1.116	1.116	0.990	1.039
1998	1.086	1.086	1.086	1.086	1.005	1.017
1999	1.048	1.048	1.048	1.048	1.000	1.000
2000	1.000	1.000	1.000	1.000	1	4/

NOTES:

1. Based on OSD (C) rates. Source: National Defense Budget Estimates for FY 01, March 2000, Tables 5-13 and 5-9.
2. Based on composite of Consumer Price Index (CPI)-Durables; CPI-Nondurables (less food & apparel), and Producer Price Index (PPI)-Industrial Commodities.
3. Based on CPI-Services less rent of shelter.
4. Indices for FY 00 not yet available.

APPENDIX C

Analysis Support

Call

DSN 680 + extension or Commercial (757) 788 + extension

- If you need some ideas for handling a cost problem, ask for Mr. Rathmann (4451/2122).
- If you need help finding the right inflation index, or applying the index correctly, call and ask for Mr. West (2341).
- If you have questions on a return on investment study, or want to discuss a particular statistical application, call and ask for Mr. Atkinson (4198/4242).
- If you need an MOS course cost on a per graduate basis or tuition cost for non-DOD students planning to attend your course, ask for Mr. Collins (4242/4198) or Mrs. Bates (4452).
- If you need help with interpreting or applying the CER or MER, ask for Mr. ATkinson or Mr. West (4198/2341).
- If you have questions concerning conference cost estimates, contact Mrs. Bates.
- If you require assistance with an economic analysis or other type of cost/benefit study, ask for Mrs. Bates orMr. Atkinson.
- If you have specific questions about forecasting techniques, or need assistance with optimization/linear programming problems, ask for Mr. West.
- If you have questions concerning an Interservice Training Review Organization (ITRO) study cost analysis, ask for Mr. Collins or Mr. West.
- The CER/MER application model is available in Microsoft Access. Call Mr. Atkinson for a copy and assistance in its use.
- If you have questions concerning the FMS/IMET program, contact Ms. Bradley (4474).